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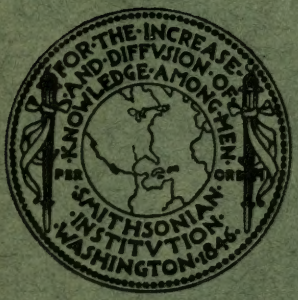
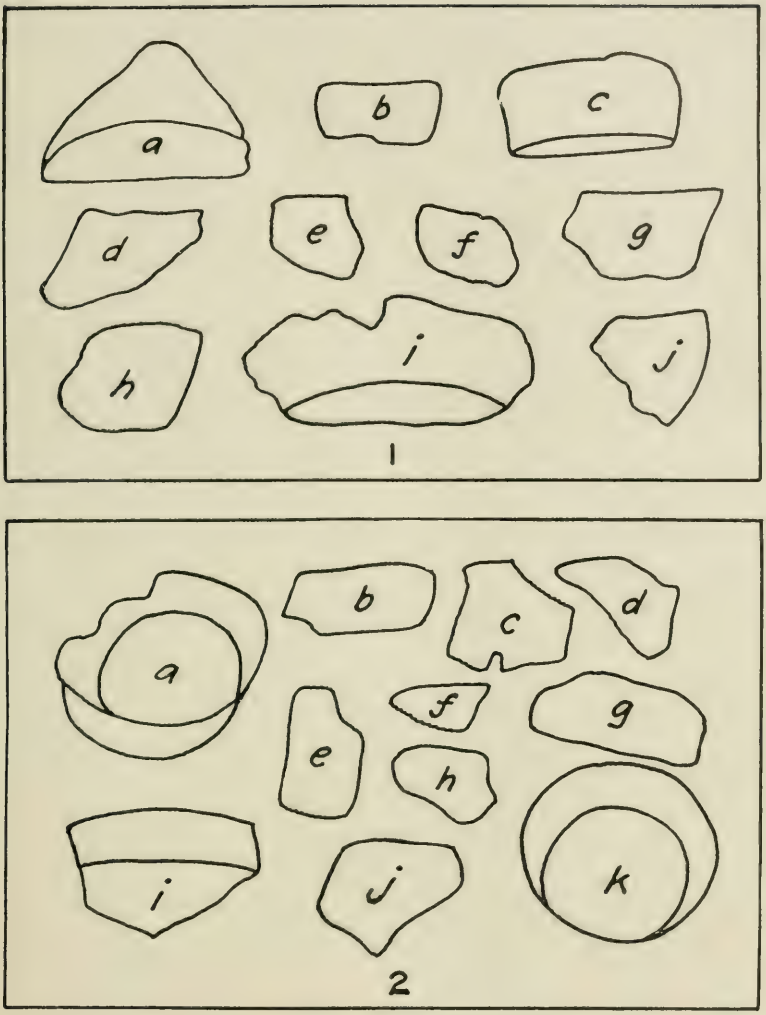
CERAMIC SEQUENCES AT TRES ZAPOTES, VERACRUZ, MEXICO

By
PHILIP DRUCKER



VARIOUS WARES AND POLYCHROME SHERDS, SHOWING COLOR RANGE.
(For explanation, see key on opposite page.)



KEY TO PLATE 1.

1. Polychrome sherds, showing color range. *b, c, e, f,* Buff slipped; *a, d, g, h, i, j,* Cream-white slip.
2. Various wares, showing color range. *a, g, k,* Variations of Brown ware slips (*g* is modeled tab of flaring-rim bowl); *b, d,* orange-slipped Polychrome with slightly aberrant designs; *c, e* Lost-color ware; *h, j,* gray-slipped Polychrome; *i,* Smoked Black Polychrome.

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By
PHILIP DRUCKER

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LETTER OF TRANSMITTAL

SMITHSONIAN INSTITUTION,
BUREAU OF AMERICAN ETHNOLOGY,
Washington, D. C., November 16, 1942.

SIR: I have the honor to transmit herewith a manuscript entitled "Ceramic Sequences at Tres Zapotes, Veracruz, Mexico," by Philip Drucker, and to recommend that it be published as a bulletin of the Bureau of American Ethnology.

Very respectfully yours,

M. W. STIRLING, *Chief.*

DR. C. G. ABBOT,
Secretary of the Smithsonian Institution.

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CERAMIC SEQUENCES AT TRES ZAPOTES VERACRUZ, MEXICO

By Philip Drucker

INTRODUCTION

The present report is a historically intended ceramic study based on material collected by the National Geographic-Smithsonian Institution joint archeological expedition to southern Veracruz, Mexico, in 1940. The principal excavations were carried on at a site designated Tres Zapotes, after the modern village nearby (fig. 1). M. W. Stirling, the leader of the expedition, has made a general report on the work, and has described as well some important finds made in the course of systematic reconnaissance in adjacent regions (Stirling, 1940 b). The present paper is, therefore, a technical one centering on the pottery objects—chiefly vessel fragments and figurines—recovered during the work.

Ever since the discovery over 30 years ago (Holmes, 1907) of the significance of the Tuxtla statuette with its early date, the southern Veracruz region has been recognized as an archeologically important zone. Conceivably, it might hold the key to the problem of Maya-Huastec relationships, to the Maya problem in general, and investigations there might ultimately cast some light on the major problem of Middle American civilizations. And yet, strangely enough, no scientific work was ever done there until quite recently.[1] It was known that extensive sites existed there; in fact the Tres Zapotes site itself was mentioned in the 70's of the last century in connection with a description of the Colossal Head, one of the major stone monuments.[2] More recently Weyerstall (1932) visited the site. Scientific archeological exploration of the region may be said to have begun with Stirling's visit to the site in 1938, at which time he recognized its potentialities and planned intensive research there. At about the same time Ruppert and Valenzuela investigated some localities near

[1] Strebel's far-ranging surveys stopped just short of the region.

[2] Melgar, 1869, 1871. Other early references to sites in the Tuxtla region are: Kerber, 1882; Seler, 1915; Seler-Sachs, 1915; etc.

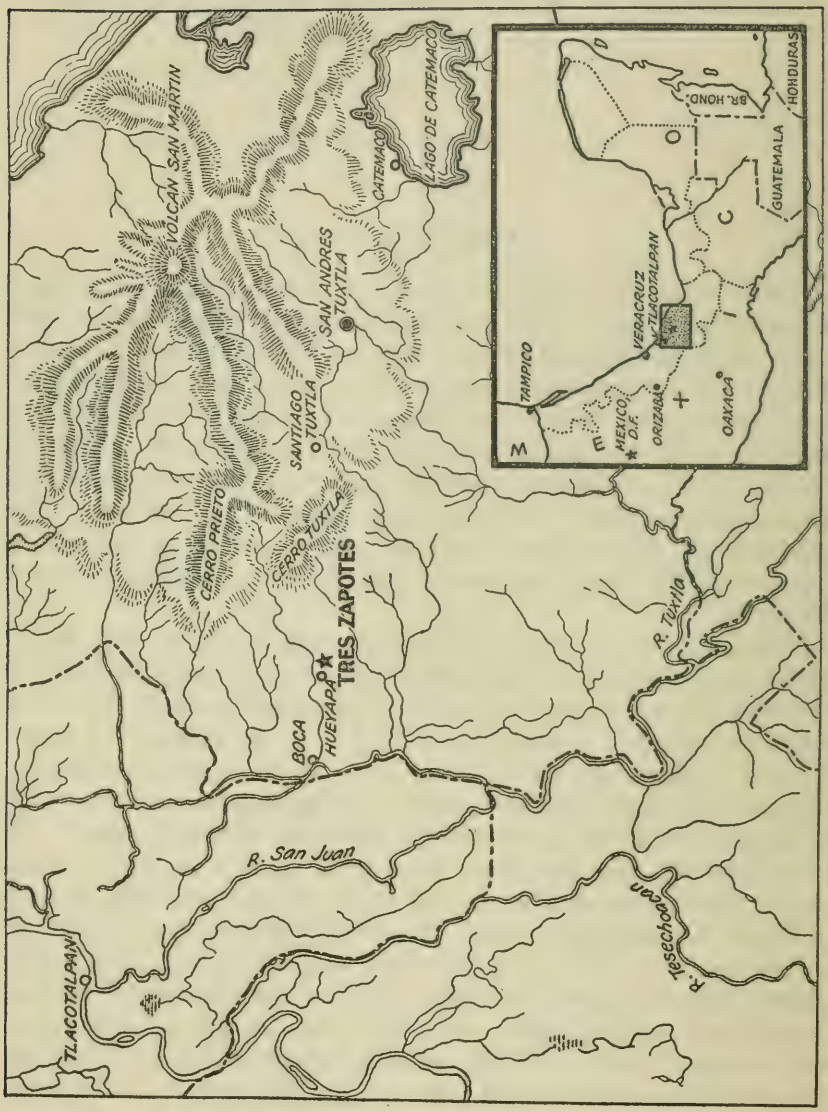

FIGURE 1.—Map of southern Mexico, showing location of Tres Zapotes.

San Andrés Tuxtla for the Museo Nacional de Mexico.[3] In 1939 and again in 1940 Stirling directed the researches of the National Geographic-Smithsonian Institution Expedition at the Tres Zapotes site. About 3½ months were spent each year, working locally recruited 30-man crews. The first season's work was exploratory, occupied with finding and clearing stone monuments, and testing the site for undisturbed deposit. Most of the trenches were mound explorations, which, though they yielded data on these structures and provided a rich body of artifact material for typological analysis, naturally could give no insight into the history of the culture. Weiant (1943), who was Stirling's assistant in 1939, has reported on the finds of that season.

In the 1940 season, it was felt that the most fruitful method of following up the previous year's work would be to make a careful stratigraphic excavation in the locality where the maximum deposit had been found. This work was entrusted to the present writer. In the course of the season, inspection suggested other parts of the site which might repay excavation, and a number of test pits were dug. In this way several places suitable for stratigraphic work were found, and a total of four stratigraphic trenches were dug.[4] It is with the results of these four trenches that this report is primarily concerned.

The present paper makes no pretense at outlining the culture-history of the former inhabitants of Tres Zapotes. Artifactual remains, other than pottery, are so few and scattered that a functional interpretation of the culture is well-nigh impossible to make. Instead, the aim is to work out the history of the pottery complex only. The result will be to establish not a culture column, but a ceramic column covering the entire period or periods of occupation of the site. We should be able to place this ceramic column in time, approximately at least, on the basis of local evidence and comparisons with the better known Maya area and the Highland. This should give us a serviceable yardstick for placing other sites in the region, and thus open the way for orderly scientific research there. The definition of a Tres Zapotes ceramic column is thus the main goal of this report.

To achieve this goal the material method of presentation is as follows: After a brief account of the site and its environs, the 1940 trenches will be described, a typological discussion of local wares will be given, and, finally, the vertical distributions of these wares in the stratigraphic trenches will be presented and summed up.

It should be fair enough, since this introduction is actually the last section of the report to be written, to present a brief of the find-

[3] The results of Valenzuela's work have not yet been published.
[4] A few mound sections also were made.

ings to enable the reader to follow the argument more closely through the tedious descriptions of trenches and wares. The final analyses demonstrate two main periods of prehistoric occupation of the site. One was a very long period, during which ceramic patterns changed, presumably through normal processes of culture growth. This is the Tres Zapotes period proper. There was no break in the ceramic tradition from beginning to end of this period. Following the occupation which these pottery remains represent, the site was abandoned. Jungle grew up in the dwelling places, the plazas, and on the mounds. Then the site was reoccupied briefly by a people, likely a small group from the scantiness of their remains, who made pottery of a completely different sort. This is the Soncautla complex, named after a site near Jalapa reported on by Strebel (1885–89, vol. 2, pp. 86–93) from which come a number of specialized vessel types identical with those which are intrusive into the Tres Zapotes deposits.

The Tres Zapotes material itself divides into three main chronological divisions on the basis of changing preferences for certain wares and innovations. It must be borne in mind that throughout the Tres Zapotes period proper we have to do with a ceramic, and inferentially a cultural continuum. The divisions have been termed "phases" to avoid any connotations of cultural unconformities. Thus we have a Lower, a Middle, and an Upper phase of Tres Zapotes ceramics. The Lower is distinguished by monochrome wares and few figurine types, the Middle by a growing Polychrome pattern and modifications of the Early figurines, the Upper by quantitative predominance of Polychrome ware and new, probably introduced, figurine types and minor pottery artifacts.

In view of the fact that there are two reports on Tres Zapotes ceramics appearing within a short time of each other—Weiant's paper on specimens obtained in 1939, and the present one on 1940 materials—it seems necessary to state their relationship and to recapitulate their aims. Weiant's paper is primarily typological and comparative. He did no stratigraphic excavating, in the ordinary sense of the phrase. However, by means of segregating materials associated with burials from the Ranchito locality (which he divides into two groups. "Deep Burials" and "Surface (Cremation) Burials"), and on the basis of differentiation of material from different levels, of two mounds, he determines two ceramic periods, one of which he subdivides. His "Upper Tres Zapotes" (the two papers have been correlated terminologically as far as possible) is about the equivalent of the Upper phase *and* the unconformable "Soncautla complex" of the present paper. This is one of the major points of difference in the two reports. Its significance results from the fact that it affects the temporal placing of the close of the continuous

Tres Zapotes occupation. It must be admitted that the present writer had a much smaller sampling of Soncautla (Cremation Burial) material to work with—a single lot of nine vessels and two figurines. This limited sample, however, occurred under conditions which point beyond any question to its intrusive position in the deposits. Since a large proportion of Weiant's *complete* vessels from his "Surface (Cremation) Burials" are of the same types as those in this intrusive lot, it is assumed here that the 1939 Surface Burials belong to the same complex, and the other wares of Weiant's "Upper Tres Zapotes" are materials from the pitfall of the graves. The question boils down to a matter of relative field techniques and sampling. I hope to be able to clear up the problem, one way or the other, through a study of materials from the nearby site of San Marcos.

The second major point of difference concerns the division of the Middle phase into two parts, as Weiant has done in his Middle A and Middle B. The sherd-counts of the present writer's stratitests give no suggestion of such a break, and in this instance the mathematical sampling is surely in their favor. Yet it is possible that there is an occupational horizon equivalent to Weiant's Middle A from which the material was scraped for mound-building, which was absent from the localities of the 1940 stratitests.

The horizon serving as the source of materials of the Lower phase of the present paper was not encountered during the 1939 season.

Other differences occur in such things as ware classifications, and the like, but these are for the most part terminological. As will be brought out, most of the "wares" of the present report are, properly speaking, technological classes of pottery, and consequently are more comprehensive than the groups Weiant has designated "wares." In point of fact, most of his "wares" are the equivalents of the "sub-wares" of this paper.

Our respective views as to relationships with other Middle American regions, based on typological similarities, are not very close, but these are matters of opinion, and depend in the last analysis on the degree of likeness that one demands for a "similarity." Likely neither of us is altogether wrong—or altogether right. Many yards of dirt will have to be dug in the area—and dug carefully—before we can prove or disprove any hypothesis based on long range comparisons.

GEOGRAPHY OF THE SITE

A general discussion of the regional and local geography of the Tres Zapotes site has been included in Stirling's report on the stone monuments (Stirling, 1943). It will suffice for present purposes to give a brief sketch of the various features such as physical divisions

and mound groups, together with their nomenclature, to clarify the descriptions of trench locations in a following section.

There are three major mound groups at the site, several smaller ones, and, as well, the stragglers which seem to belong to no particular complex.[5] Group 1 is the southwesternmost. It lies on the long, low, end slope of the First Terrace of the plateau. A circular, medium-size mound and three smaller ones form an irregular court,

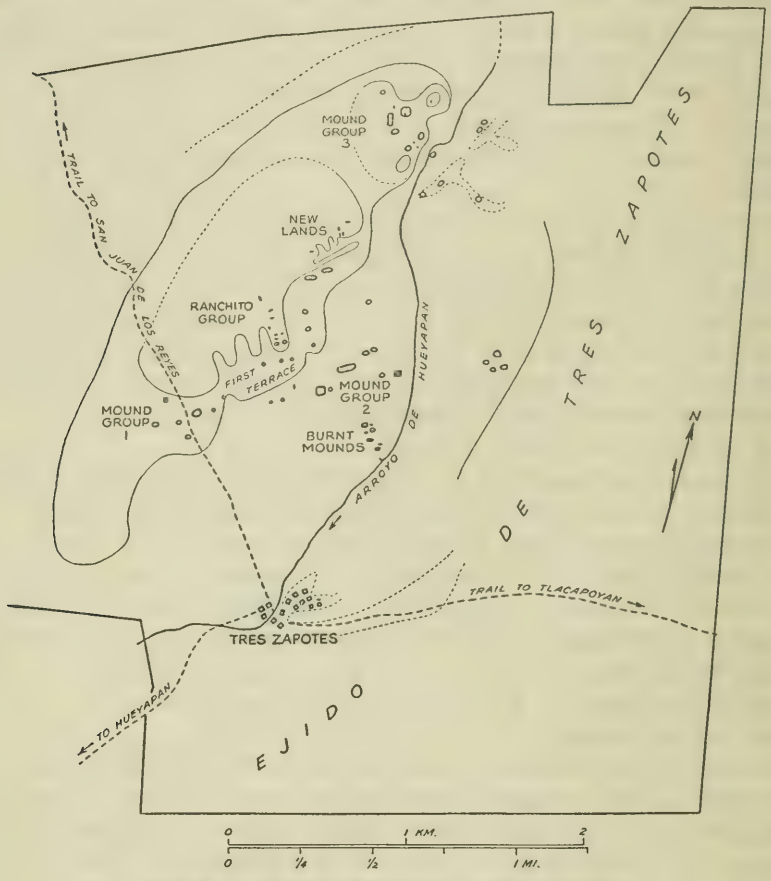

FIGURE 2.—Site and distribution of 1940 trenches.

at one side of which the Colossal Head is situated (Stirling, 1939). Two flanking mounds lie one to the east and one to the west, but slightly out of line. This group received considerable attention in 1939. It was in the largest mound that a curving five-step stairway flagged with stone was found (fig. 2). No work was done here in 1940, except

[5] No attempt will be made here to give an account of all the mounds in detail. Only the major groups and those minor ones in which work was carried on in 1940 will be described. The others, however, are indicated on the sketch map (fig. 2).

for one small unprofitable test on a spur east of the mounds which looked as though it might have a cap of refuse. Group 2 is situated on the valley plain about half a mile slightly north of east of Group 1. It contains the highest and the longest mounds of the site. These two mark the west and north sides of a large court. A pair of smaller mounds seem to bound the east and a very small one the south side. To the west two medium-sized flankers aline with the high mound and the pair to the east. Another pair of small mounds to the northeast may belong to this group. It was in one of these last-mentioned that a little stone stairway and a retaining wall was found in 1939. Work done in Group 2 in 1940 was restricted to a section of the westernmost flanking mound and a test pit in the plain nearby, since extensive operations had been conducted here in 1939. The third major complex (Group 3) lies on the top of the little isolated mesa at the northeast end of the plateau about a mile and a quarter from Group 1. Here again we find a high and a long mound associated, with two smaller mounds finishing off the "court." A fifth small mound lies off the south end of the long one. It was at the foot of the high mound of this group that the re-used stela bearing the Baktun 7 date was discovered in 1939 (Stirling, 1939, 1940 a). Off to the northeast of the group are several irregularly placed small mounds which may or may not have been part of the Group 3 complex. One of these has two rows of boulders leading from the south base to the top, where each row terminates with a stone column. Most of the mesa top is littered with surface sherds.

For the purposes of stratigraphic testing, localities bearing refuse layers were sought. All of these had small mounds on or nearby them, but no important deposit was found in the major mound groups. The first of these localities is that called the "Ranchito." Three narrow rounded spurs extend out southward from the top of the plateau, or better, have been isolated by the cutting of shallow gullies between them, at a point nearly half a mile from Group 1. Excavations in 1939 showed the easternmost of the series to be the most promising for stratitests. Four quite small mounds stand on the southern end of the spur, in no discernible pattern. All but one are circular in plan. The exception is longer than wide and has two arms projecting southward, one at either end, which give it a U-shaped plan. Stratitests, test pits, and one mound section were dug here in 1940.

On a remnant of the First Terrace just below the Ranchito another body of deposit lies. Two trenches, a test pit and a stratitest, were dug in the west end of the bench. Two small mounds stand on the east end, overlooking the steep slope to the valley floor. One of these was sectioned in 1939. This place will be referred to in the following pages as the "First Terrace locality."

About halfway between the Ranchito and Group 3 is a locality rich in culture-bearing deposits. The fact that some of the more recently cleared of the modern milpas are located here suggests a convenient term for the locality; the "New Lands." The edge of the plateau has been cut back into a wide cove opening south-southeast. Part of the mouth of the cove is blocked by a steeply rising sandstone bluff, apparently a fault formation. In this well-sheltered spot great quantities of surface sherds are to be seen, and the soil, loose and dark, quite obviously contains large amounts of refuse. This area of deposit is perhaps 500 feet long, east and west, and nearly as wide, filling the floor of the cove and extending a good distance up the lower slope of the plateau. A little mound stands on what appears to be a slight natural elevation or spur about halfway in from the entrance. On the west the cove is bounded by several spurs eroded from the main plateau mass. Sherds are abundant on the surface of the ridges but do not extend deep. Three test pits and a stratigraphic trench were dug in this New Lands locality.

Down on the valley plain below Group 2, rather isolated from other complexes, is a group of three small mounds, with four still smaller ones irregularly placed beside them. This group was dubbed the "Burnt Mounds" in 1939. The two largest are linked by a narrow ridge. They stand 6 to 7 feet above the present plain, and are 60 to 70 feet across. Digging showed them to have been more imposing formerly; they are partly buried by the aggradation of the plain. The third mound is smaller than either of these. Originally it must have been about half their size. The four outlying mounds are low hillocks 2 to 3 feet above the plain, and are all in the neighborhood of 30 feet across as they now stand. The arroyo 500 feet away has sectioned the entire valley floor, and it gave the lead that made this group especially important. It was here that a deep and relatively ancient cultural stratum was found isolated far below the present plain and as well the horizon represented by the mounds. Two mound cuts, a test pit, and a deep stratitest were dug in the Burnt Mounds Group.

The only excavations made east of the arroyo were at the southern border of the "laguna" at the end of Tres Zapotes village. Some local children had come upon a great quantity of very striking material, which they brought in. It seemed apparent that they had located a concentration or an isolated horizon of a ceramic type known from a sprinkling of specimens excavated in other localities. The people showed us the discovery pit without hesitancy, and two trenches were dug in the Laguna locality.

To sum up, at the Tres Zapotes site we find extensive areas of refuse and occupational material along the lower slopes of the plateau that

bounds the little valley plain, with most of the earth mounds likewise on the lower slopes or out on the plain itself. Deep below the present valley floor and its mounds the excavations at the Burnt Mounds Group revealed an extensive early horizon.

1940 EXCAVATIONS AT TRES ZAPOTES

METHOD

The methodology followed in the 1940 excavations can be recounted briefly. Test pits, being purely exploratory and meant to determine depth and extent of the refuse deposits, were dug with no regard to levels. The ceramic material recovered was culled in the field; only rims, bases, decorated sherds, and figurines were saved. Mound cuts were dug in the same way, and material from them was similarly treated. The material saved from test pits and mound cuts was segregated and packed in lots marked with the proper trench number. The stratigraphic trenches were dug in arbitrary levels 12 inches thick (save for trench 1, dug in 6-inch units below the 0- to 12-inch layer). It was not possible for the native workmen, using picks and shovels in the heavy soil, to keep the levels exact at all times, but on the whole they succeeded pretty well. The slight departures from the 12-inch standard probably average out. All sherds and figurines, etc., from each level were kept together in baskets with Dennison tags marked with trench number, level, and date. Each level-lot of sherds was washed separately and packed for shipment, the boxes being marked with the provenience of the contents as an additional check.[6]

In excavating, lots of burial goods, cache materials, and the like were noted, and, where there was any quantity of objects, were segregated. On a few occasions, however, pits intrusive from an upper level were not seen in time to segregate the contents, so that only a portion of the sherds in the pitfall could be kept separate. The probable mixing was noted and can be checked against any irregularities in final sherd counts.

In the descriptive sections the English system of measurement is used.[7] Horizontal measurements relating to the excavations are always given in feet and depths in inches.

THE DEPOSITS

It scarcely seems necessary to point out that the first step in stratigraphic excavation—and in its exposition—must be the determination of the physical nature of the deposits. Stratigraphy derived from a series of superimposed pyramids or temples, such as are found in

[6] The sherd washing and packing was done by local help under the competent supervision of Mrs. Marion Stirling.

[7] 1 inch=2.52 cm.; 1 foot=0.302 m.

the Maya area proper, and that obtained from earth mounds (which someone has called "Indians' backdirt piles"), from burial association sequences, and from refuse deposits are alike only in general aim; the field methods by which they are worked out and the interpretations of data from them must be completely different. An attempt will, therefore, be made to account for the origin and present condition of the deposits at Tres Zapotes in which the stratitests were put. Two problems are involved here. One is the source of the cultural remains,[8] whether they are from burial goods, true occupational accumulations (house floors, kitchen middens), or refuse dumps (formed near but not on the simultaneously occupied areas). The second question concerns the physical nature of the deposit, that is to say, the source and mode of deposition of the noncultural material. The result of this inquiry inevitably must bear upon any conclusions as to age of cultural remains found.

The first problem, that relating to the source of the cultural remains in the Tres Zapotes deposits, is less difficult to clarify than the second. Inspection readily indicates that for the most part they are of the refuse dump type. While they contain, in addition to artifacts, animal bone, bits of charcoal, and manufacturing wastage such as obsidian cores, in short, habitational debris, only in a few levels were these materials concentrated in definite lenses or beds indicative of directly deposited occupational layers. The bulk of the sections worked are, therefore, unbedded refuse dumps from (presumably) nearby living areas. For our purposes they may be considered primary deposits.

A few instances of middenlike deposit, characterized by dark color and distinctive texture due to high charcoal and ash (and other organic materials?) content, were found (trenches 1, 10, 13). In the lower levels of trench 1, this "midden" material was distributed in floorlike areas, one of which was plainly associated with a firepit. (No attempt was made to work out houses, since comparable stratigraphic units were desired.)

No concentrated burial area was found, but here and there burials were found intruded into the refuse dump deposit (and in one instance into direct occupational debris). The all-important point of origin of the gravepit was determined when possible, and the definitely associated artifacts were segregated from the general level material, as elsewhere described.

The noncultural formation of these dump deposits was rendered perplexing by the fact that all contained large quantities of brown to yellowish-brown clayey soil. At the same time their general structure, the bright crisp appearance of many sherds, the occurrence of complete

[8] "Cultural remains" is used here to cover all vestiges of human activity, including structures, results of controlled fires, and food remains (plant and animal) as well as the artifacts.

or restorable vessels, and (apparently) undisturbed burials in shallow pits at various levels, all speak against the possibility of any artificial building being involved. Nor does it seem possible that housesweepings or dirt tracked up on human or animal feet could account for it all. Rather, it is far more probable that this peculiar constitution of the deposits is due to natural processes of soil formation. The deposits would correspond to immature soil profiles in which the A and B zones are but slightly differentiated. Although the formation of soil is believed to be a very slow process in temperate zones, experts are agreed that in the tropics such factors as higher mean annual temperature, high humidity, and absence of winter seasons (in which soil forming processes are stopped) result in a tremendous increase of rate (Vageler, 1933, pp. 4, 16, and passim). Furthermore, the organic content of the deposit would provide a rich source of the colloids, so important in both physical and chemical soil activity (Vageler, 1933, pp. 15, 75 ff.). When, added to these factors, the upward trend of deposition found in the intermittently humid Tropics is operative,[9] it seems reasonable to assume that soil could form in the deposits partly from the underlying horizons and in part from the occupational debris within a relatively short time. That a certain amount of soil activity has taken place is demonstrated by such facts as the brown to yellowish-brown color of the deposits, presumably due to reduction by organic substances of the iron hydroxides which give natural local profiles their typical red color (Vageler, 1933, pp. 52, 53), and to the much deeper intrusion of dark-colored humic materials in the deposits than in natural profiles, with which is correlated a greater acid activity in these superficial levels as shown by the more heavily eroded sherds contained in them. Most significant are the traces of slight soil divisions in two trenches (13 and 19) in which the lower levels are faintly lighter in texture and color than the upper, apparently representing the beginnings of the (inverted) A and B soil horizons typical of this climatological zone. Substantiating this interpretation of the development toward normal profiles in trenches 13 and 19 is the fact that these two are the only ones in which the deposits lie directly on the (parent) horizon, the sandstone country rock. Elsewhere the deposits were relatively thin caps on the deep clay soils of the region and functioned only as small parts of the complete soil profiles.

THE TRENCHES

In the 1940 season, 27 cuts were put down in various parts of the site. The accompanying tabulation shows their nature and distribu-

[9] Vageler, 1933, p. 173. Typically this trend is so pronounced as to place the illuvial (B) horizon above the eluvial one (loc. cit.).

tion. (See also fig. 2.) Trenches 1 to 7, and 10, were dug in the Ranchito ridge; trenches 8 and 13, in the little terrace just below the Ranchito; trenches 9 and 22 in Mound Group 2; and trenches 11, 12, 14, and 19 in the newly cleared lands on the edge of the plateau between Groups 2 and 3. Trenches 15 to 18 and tests W, X, and Y were put down in Mound Group 3. Trenches 20 and 21 were dug in the border of the "laguna," a *bajo* at the northeast end of the village of Tres Zapotes. Trenches 23 to 25, and 27 were dug in the "Burnt Mounds" group, down on the valley bottom near the arroyo. Trench 26 was dug in the arroyo bank adjacent to the Burnt Mounds group.

Trench No.	*Type*	*Locality*
1	Stratitest	Ranchito.
2	Test pit (not completed)	Ranchito.
3	Test pit (not completed)	Ranchito.
4	Mound section	Ranchito.
5	Test pit	Ranchito.
6	Test pit	Ranchito.
7	Test pit	Ranchito.
8	Test pit	First Terrace.
9	Test pit	Group 2.
10	Stratitest [1]	Ranchito.
11	Test pit	New Lands.
12	Test pit	New Lands.
13	Stratitest	First Terrace.
14	Test pit	New Lands.
15	Test pit	Group 3.
16	Mound section	Group 3.
17	Test pit	Group 3.
18	Test pit	Group 3.
W, X, Y	Tests	Group 3.
19	Stratitest	New Lands.
20	Test pit	Laguna.
21	Test pit	Laguna.
22	Mound section	Group 2.
23	Mound section	Burnt Mounds.
24	Mound section	Burnt Mounds.
25	Test pit	Burnt Mounds.
26	Stratitest	Burnt Mounds.
27	Mound section	Burnt Mounds.

[1] Begun as test pit to locate material of Soncautla complex; secondarily made into stratigraphic section.

Ranchito ridge trenches (1 to 7, 10).—A number of cuts were made in easternmost of the Ranchito ridges, to determine the extent of the deposit which digging in 1939 had shown to be rich, and for this site deep, and to test it stratigraphically (fig. 3).

Trench 1, the stratitest, was laid out transverse to the ridge, 30 feet east-west by 10 feet north-south. The first level was 12 inches deep; the remainder of the trench was dug in 6-inch levels. Completion of the trench to the irregular subsoil 72 to 75 inches deep (one large de-

pression was 20 inches deeper) revealed a section of some complexity. The upper 4 to 4½ feet contained a number of areas disturbed by intrusive pits and burials. It was not possible to segregate the material from pitfall, chiefly because of the very gradual color transition of this upper zone from the base of the superficial black layer to the

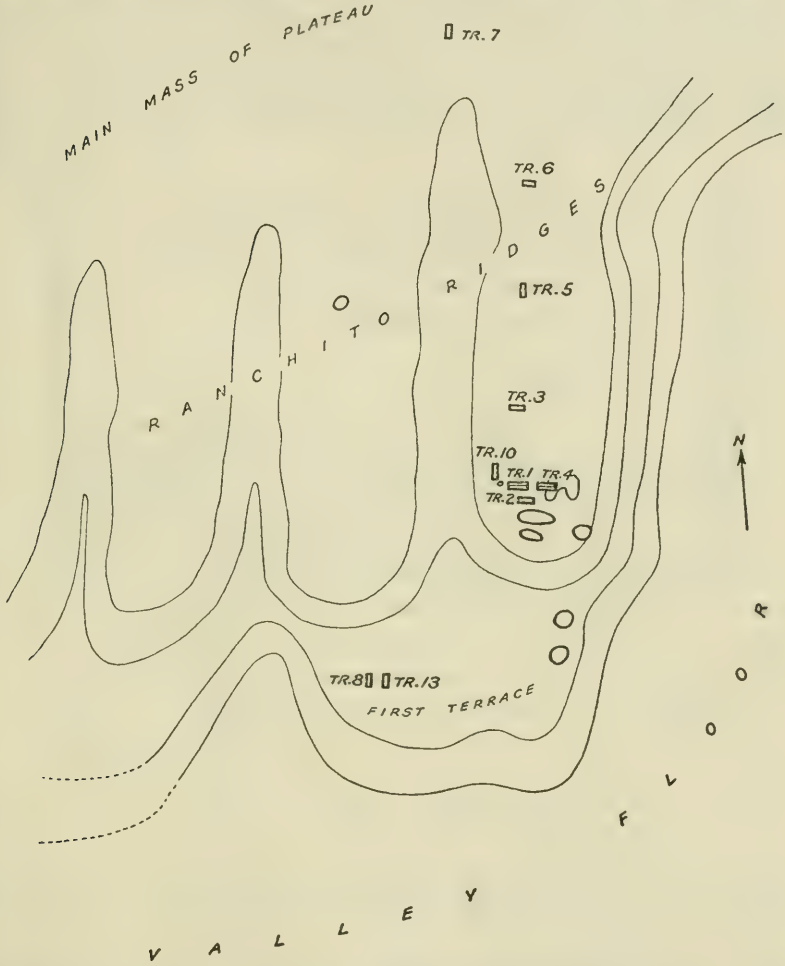

FIGURE 3.—Sketch of Ranchito ridges and First Terrace, showing trenches. Contours approximately 10 feet.

48- to 56-inch level. This served to make the points of origin of the pits imperceptible—it was only in the lower portions that the disturbed areas could be defined. Actually, however, analysis of the ceramic material indicates that the disturbances must have been less extensive than was supposed at first. As checked by other stratitests, the trench 1 material is only slightly askew. The few deviations may be ac-

counted for in terms of the intrusive pits. Certainly, the carried-up sherds, if such they were, can affect the percentages but little. Most of them were too dilapidated to be classified, and thus not included in the counts.

Fortunately, a very slightly disturbed midden stratum was found below the disturbed one. A series of thin overlapping black floor areas partially covered a paving of sandstone slabs or blocks. The pavement extended the length of the trench almost to the west wall and across most of the trench. Between them, the floor areas and the paving completely sealed the midden material in the bottom of the trench, save for an intrusive pit in the southeast corner which the

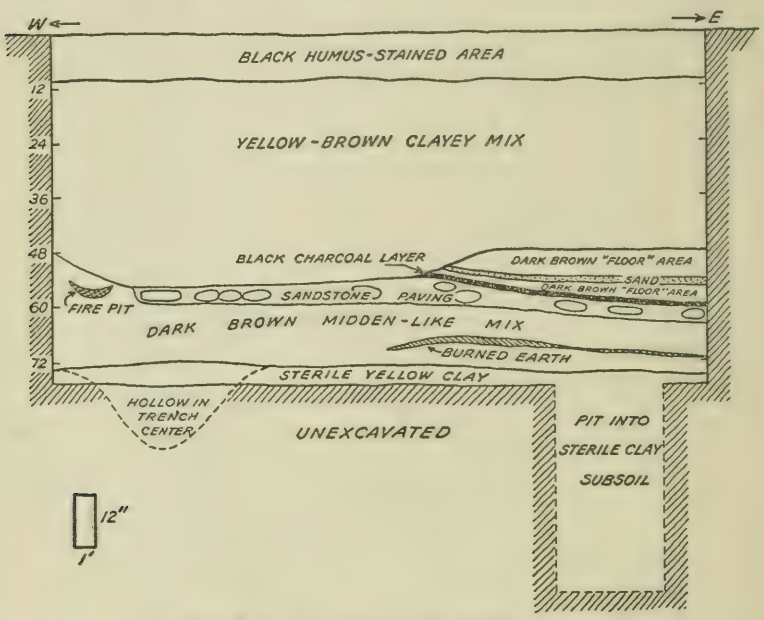

FIGURE 4.—Trench 1, profile (north wall).

trench intersected for a few feet. The undisturbed nature of the midden stratum makes it the most important member of the series. No matter when the disturbances of the upper level took place, the midden layer, sealed as it was by the floors and paving, was obviously not affected by intrusions from later periods, except in the one small area just mentioned. It was the best source of ceramic materials in the trench.

From this general description we may proceed to a more detailed account of the horizons and features of trench 1 (see fig. 4; pl. 5, fig. 1). The upper horizon consisted of two parts; one, a black clayey layer, 10 to 12 inches thick, overlay a brown clayey layer. It is of utmost importance to note that as far as could be determined these

two layers consisted of the same basic soil. They contained about the same relative quantity and kinds of sherds, although those from the black level were in a much poorer state of preservation. Presumably, there was no differentiation between the soil layers in former times. The black coloring of the superior layer must be attributed to the accumulation of organic materials after abandonment and forestation of the ridge. The same sort of black layer, that is, an organic level of the same soil type and texture as that below it, was noted in all the cuts made at the Tres Zapotes site (except those in the aggraded valley floor), and represents the "mild humus" zone of a normal soil profile.[10]

The clayey mix persisted to a depth of 47 inches in the east end of the cut and 56 inches in the west central portion. In the east end, extending 14 feet out (measured along the north wall), and at the extreme west end, were the black floorlike areas; between them, at a depth of 56 inches, lay an unbroken area of paving, 4 to 6 inches thick. The northwest corner of the trench cut through a fireplace, which was associated with the floor material at that place. From the profile it seems likely that the floor areas were once continuous and are now separated by a shallow intrusive pit. The sandstone of which the pavement was made had disintegrated until it was impossible to tell whether irregular slabs or trimmed blocks of stone had been used in its construction. Beneath the floors and paving lay undisturbed midden. A rich dark-brown color, high ash and charcoal content, lenses of charcoal, and quantities of animal bone gave this material a distinctive appearance. The sherds it contained were crisp and shiny in appearance, and many were quite large. They could almost be distinguished from the specimens from the uppermost clayey horizon on the basis of preservation alone. At a depth ranging from 72 to 75 inches (save for the irregular depression mentioned before, p. 12) the subsoil occurred. This was marked by a thin layer of reddish-brown angular sand and gravel overlying a bright yellow clay. The clay was completely sterile and quite tight. A 5- by 5-foot test in the east end of the trench showed the clay to continue 4 feet below the adjacent sherd-bearing horizon without any indication of change or previous disturbance. This same material formed the subsoil elsewhere on the Ranchito ridge.[11]

As has been stated, a number of intrusions (burials, and pits dug for unknown purposes) were observed in the deposit superior to the floors and sandstone paving. In the west end of the trench badly

[10] Robinson, 1936, p. 60: "Under deciduous forest, plant residues . . . are *incorporated with* the soil as 'mild' humus . . ." [italics mine.] As deep a dark humus-bearing layer as this is rare in tropical soils.

[11] This is apparently the eluvial (A) horizon, from which the illuvial one had been eroded. Cf. trench 18, where mixing gave evidence that the same type of yellow clay underlay the usual red surface material.

decomposed human-bone fragments occurred at a depth of 44 inches, extending over an area 32 inches east-west and 12 inches north-south. There were no grave furnishings. Burial position was indeterminable. No pit outline could be traced. Near the southwest corner of the trench, an intrusive pit about 4 feet across, penetrating the deposit to the sandstone paving at 56 inches, had its probable point of origin between 24 and 36 inches. The upper portions of the pitfall could not be distinguished precisely from the surrounding deposit. Near the bottom however the pit was sharply defined. The pit contained numerous and sizeable sherds of large ollas, and toward the bottom a large tubular figurine arm of the "Lirios" type (see p. 83), quantities of burned animal- and bird-bone fragments and what appeared to be charred vegetable material. The large pit in midtrench which cut through the floor areas was put down prior to the one just described. The southeast corner of the trench cut a segment containing 6 to 8 square feet into a circular pit whose point of origin was in the clayey fill somewhere above the black and sandy floor layers. This pit penetrated the paving and the subfloor midden layers to a depth of 74 inches. Its lower portion was marked by the readily distinguishable pitfall. So far as could be determined from the excavated portion, it contained nothing in the way of distinctive material, aside from a few upper-horizon sherds.

A burial was uncovered just below the sandstone flooring near the south trench wall. It had been interred prior to the construction of the floor, which was unbroken above the remains. The bones were in better condition than most from the site, that is to say, they were well enough preserved to permit their being exposed and photographed (pl. 8, fig. 1). The skull, badly crushed, lay upside down over a disarticulated pile of long bones. Apparently this was a secondary interment. No grave offerings accompanied it.

The previously mentioned pit in the clay subsoil seems to have been a natural depression in the irregular surface of the clay rather than a man-made feature. From the contents, it seems as though a deliberate attempt had been made to fill it. In addition to mix and sherds, it contained quantities of stone, both unworked chunks and pieces of five broken metates and half a dozen mano fragments.

As has been stated, analysis of the sherds shows that despite minor irregularities the various disturbances of the trench 1 mix were not great enough to alter the general trend of ceramic types. That means that the sherd content of the undisturbed areas was great enough so that the few intrusive sherds included in a 6-inch level affect the percentages but slightly. The chief variations from the trends of less disturbed stratitests occur in the figurine types, for among these rarer objects a single misplaced specimen stands out sharply.

Trench 2, 10 by 20 feet, was laid out 20 feet south of and parallel to trench 1. Trench 3, 5 by 10 feet, was laid out 150 feet up the ridge. Since both these cuts showed quite early that the nature of the deposit was essentially the same at these points as at trench 1 they were abandoned to permit digging farther out from the stratitest.

Trench 4 was an extension of trench 1, laid out to section a spur of a small earth mound. The mound was the small U-shaped one mentioned previously. The trench, 10 by 30 feet, cut across the western arm of the mound just below its junction with the main mound mass. The complexities caused by numerous intrusive pits and burials defeated the aim for which the trench was originally laid out—that of relating the mound to a particular level of the Ranchito deposit. In a general way, however, it was plain that the mound belonged to the upper horizon disclosed in trench 1.

Of the half dozen "burials" from trench 4, indicated by toothcaps and splinters of decomposed bone, but two were accompanied by offerings. One of these, in a pit filled with brown clay slightly darker in color than the surrounding fill, contained bone fragments at a point 41 inches deep. As in other instances, owing to the very gradual color changes of the deposit, the point of origin of the grave pit could not be distinguished. In the same pit were three mold-made spindle whorls, a small tear-shaped jade pendant, a stone mano, and a "hat-shaped" stone pounder. Another burial, represented by a few fragments of infant bones and teeth, was found in a large plain olla at a depth of 60 inches. Also in the olla were a small white-rimmed Black bowl, inverted over the bone fragments, and a prismatic flake obsidian knife.

Only one of the several intrusive pits contained anything but sherds. This was a circular pit, 46 inches in diameter, whose base depth from the surface—nearly the crest of the mound—was 78 inches. Its point of origin was probably, though not certainly, below the mound-base. The mound arm was about 3 feet high (above the present surface level) at this point. In the bottom of the pit were seven pottery vessels in a matrix of red burned pitfall. Three hybrid Polychrome Brown ware vessels, a small White-slipped dish; a Brown dish, a Black ware bowl with a white base, and a Brown ware olla comprised the pit contents. The purpose of the other pits is unknown; they contained nothing that suggested a reason for digging them.

Trench 5, a test pit, was laid out 5 by 15 feet, some 300 feet north-northwest (up the ridge) from trench 1. A short distance to the north the ground fell away to a shallow swale, 40 or 50 feet across, which traversed the ridge. Cultural material was found to a depth of 32 inches, as follows: In the black clayey surface layer, 0 to 11

inches; in the brown clayey layer, 11 to 31 inches; and embedded in the upper margin (31 to 32 inches) of the otherwise sterile steel gray clay which overlay sterile yellow clay at a depth of 38 inches. The maximum depth of the trench was 58 inches.

Trench 6, also a test pit, was dug about 150 feet to the north-northwest of trench 5, on the ridge across the low swale. Sherds were found here to a maximum depth of 37 inches, in matrices of the same type as in trench 5—black clayey surface soil, and brown clay mix. A feature of especial interest was a layer of sterile yellow clay, 10 inches in maximum thickness, that separated the black and brown levels over most of the area of the cut, tapering out 1 foot 8 inches from the north wall. This yellow clay was the same as that forming the subsoil of the ridge. The layer clearly was artificial fill. At a depth of 37 inches appeared sterile undisturbed gray and yellow clays.

Just above the junction of the Ranchito ridge with the main mass of the plateau, about 300 feet north-northwest of trench 6, another test pit, trench 7, was laid out, 20 by 5 feet. The surface of the ground in this vicinity was liberally strewn with sherds. However, the deposit here proved to consist of but 10 to 12 inches of black clayey sherd-bearing soil. Directly beneath this lay sterile gray and then sterile yellow clays. Surface inspection of the area farther back on the main plateau revealed no favorable looking localities for tests; even the surface sherds dwindled away.

Trench 10 was not a stratigraphic cut in the ordinary sense of the term. It was laid out 25 feet wide along the edge of the Ranchito ridge crest west of trench 1 and driven in against a vertical face for 10 feet. The purpose of the trench was to uncover under controlled conditions some of the intrusive cremation burials found in this vicinity the preceding (1939) season. The upper layer of black clayey soil, 10 to 13 inches thick, and a few inches of the brown clayey fill (the same as noted elsewhere on the ridge) were stripped off. In this manner one lot of material was found which had been deposited since the formation of the black top soil, as indicated by the black pitfall in the pit dug 20 inches into the brown clayey mix (31 inches from the surface). There were nine small vessels and two figurines, representing wares not encountered in deposits undisturbed since the addition of the black humus content to the upper-soil zone (pl. 9, fig. 2). These objects will be described fully in a later section. They were types reported as ordinarily associated with cremated remains at the site, although with this lot were a few uncalcined splinters of bone, and some milk teeth. Apparently, the lot of vessels had been buried with a child.

A number of complete vessels and large sherds were found in the brown clayey material along with interments and several large ollas

containing unburned human bones, so this stratum was dug to the clay subsoil to furnish material to check that from trench 1. At a depth of from 30 to 40 inches, the brown clay became slightly lighter in color and sandier, but there was no well-defined break. In the north end of the cut the clayey mix lay directly on the yellow clay subsoil at a depth of 55 inches. The southern end impinged on the edge of a lens or stratum of dark midden material like that in trench 1, at 60 inches. The maximum depth of this layer was 6 inches. One additional feature of trench 10 may be noted. Just below the black surface level in the south end of the cut, a fragment of sandstone paving 5 or 6 feet wide appeared. An attempt to follow it proved fruitless, however, for it cut off abruptly in an irregular edge 2 to 3 feet farther in. It was apparently a remnant of a once more extensive pavement.

To summarize: Trench 10 checked trench 1 in type of deposit and in ceramic content, with the addition of a small sample of wares from a later unconformable horizon. As for the Ranchito locality as a whole, the tests show the southern (outer) portion of the ridge to have been the main scene of human activity in former times. Little occupational debris, or refuse, nothing in the way of structures, can be found on the main body of the plateau. Presumably, the lowlands and the terraces of the mesa were the ancient centers of the occupation which overflowed onto the nearer spurs of the highland. After the jungle had taken over the site, people of another culture dug pits to deposit the remains of their dead with pottery offerings.

First Terrace trenches (*8, 13*).—Two cuts were put down, one a test pit and the other a stratitest, on the small terrace between the Ranchito and the valley plain (fig. 3). Both were in a gentle little rise on the western end of the bench. Two small mounds, cross-sectioned in 1939, stood near the eastern edge.

Trench 8, the test, was 20 feet long by 5 wide. It sectioned a deposit of unbedded dark-brown soil, clayey, but rich in organic materials and cultural remains. The uppermost 12 inches were black, owing to intrusion of humus materials. From about 30 inches down, the soil became increasingly more sandy, but the transition was too gradual to permit differentiation of the deposit into two horizons. The bottom 6 inches of the deposit was definitely sandy, and seemed to contain fewer sherds. At 68 inches the sandstone country rock formed the base of the deposit. The sherds throughout the cut were mostly large and bright, although those in the humus level tended to be more eroded and worn than the rest. Because of the richness of the deposit, a stratitest, trench 13, was laid out 20 feet by 10 feet, east of and parallel to trench 8.

Trench 13 was dug in 12-inch levels. The deposit was the same as that in the test pit. The soil below 30 to 36 inches became gradually lighter in texture and color (see fig. 5). There were a few minor

differences: A small sandstone block, perhaps an erosional remnant, intruded into the east side of the trench, but by great good fortune the cut missed all but an inch or two of the top and 1 foot 4 inches of the base of its steep face. At 47 inches the southeast corner of the trench cut the edge of a middenlike layer that dipped sharply to westward, cutting out on the level of the sandstone 7 feet from the east wall. Two burials, of which little but the toothcaps remained, were noted. One was in the 12- to 24-inch level; the other in the 48- to 60-inch level. No objects were found in definite association with either of them. No other indications of disturbances were noted. Of

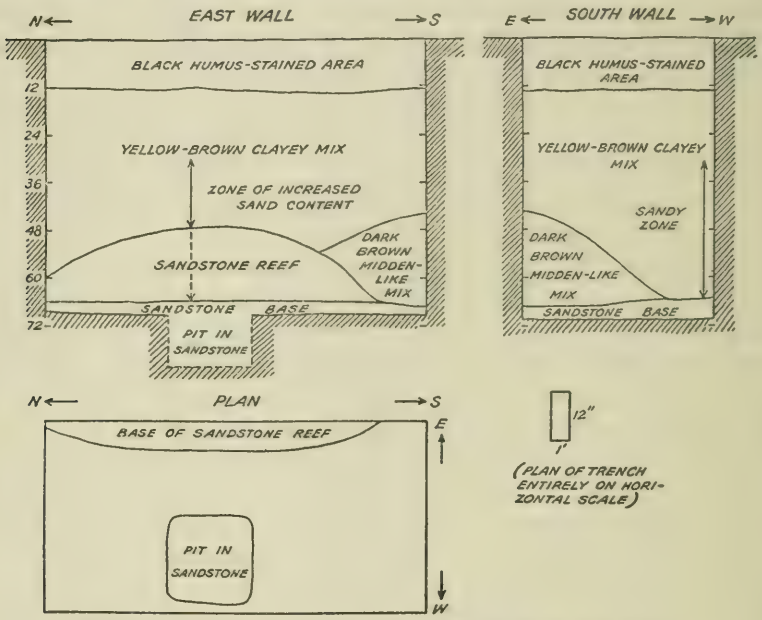

FIGURE 5.—Trench 13, profiles (east and south walls) and plan.

special features, the most interesting was a nearly rectangular pit with vertical sides cut into the sandstone base of the deposit (pl. 5, fig. 2). The pit measured 4 feet 4 inches by 4 feet 9 inches, and was 18 inches deep (i. e., measured from the surface of the sandstone). There was nothing in it but ordinary mix, with sherds and the like. Perhaps it once served as a catchment basin; on being cleaned out it began to fill with water seeping over the sandstone from the Ranchito ridges above.

Group 2 trenches (9 and 22).—During the 1940 season only two trenches were dug in the Group 2 area. One of these was trench 9, a test pit, dug in the valley plain some 200 feet out from the base of the slope of the first terrace. The pit was laid out 20 by 5 feet. At a depth of 72 inches it was abandoned because percolation of soil

water made digging impossible. By the time the water table had lowered, toward the end of the dry season, there was no time to go back to complete the cut. No more than half a dozen sherds were encountered down to the depth. However, the nearly sterile deposit was made important by the fact that the niggardly yield of material was distributed throughout the entire vertical section, and the black-capped reddish clay and sand soil contained minute pellets of pottery and flecks of charcoal to the bottom of the pit. The fact that the humus level in trench 9 was of about the same depth as in other cuts on the site, and that the base of at least one of the mounds of the group was not nearly so deep below the present surface indicates that the erosion and aggradation responsible for the deposit took place during the occupation of the site.

Trench 22 was laid out to section the westernmost of the small flanking mounds of Group 2. It was driven about halfway through the low mound. The trench was laid out 10 by 30 feet, 4 or 5 feet in from the eastern edge of the mound. At a point about a foot below the present surface of the valley plain, the cut was narrowed to 5 feet, and put down 4 feet deeper (pl. 6, fig. 2). The results of the investigation were not as clean-cut as might have been desired, owing to the mixed and nondescript nature of much of the fill, but there was conclusive evidence of at least two and perhaps more building periods involved in the construction of the mound. The structure at present is low subconical in shape, nearly 70 feet across, the crest 8 feet above the plain. At a point 6½ to 7 feet below the crest (the deeper measurement at the head of the cut) was a layer of soil much darker than the rest of which the mound was built. This layer was from 16 to 20 inches thick, dipping sharply and pinching out on the east (outer) end and dipping gradually to the west. It appears very clearly in plate 6, figure 2, except in the southwest corner of the trench where it was interrupted by an intrusive pit. It was capped in the area along the head of the trench by a mixed layer containing a high proportion of ash, charcoal, and lumps of burned clay with stem impressions—apparently wattle. This horizon shows in the plate as a light-colored streak across the west wall. The black layer (and the ash, etc.—remains of a burned structure?—upon it) would seem to be a former mound top, subsequently buried by enlargement of the mound. The reason for the distinctive color of the layer is not clear. It may represent a cap put on a still earlier mound, made by a shallow scraping off of humus-stained surface soil. The dip of the east edge of the black cap appears continued by a none-too-definite line of textural and drainage difference which may be the outline of the basal mound. This line leveled off about 1½ feet from the bottom of the cut (3½ feet below the present surface). If the area enclosed by this line was an older mound

there ought to have been a perceptible base line, but none could be found. The only indication of change was the marked diminution of sherds, etc., of which the mound proper contained a high quantity, to nearly none, at about 3 to 4 feet below the surface of the modern plain. (The dark area along the base of the trench in the photograph is shadow from slight undercutting done in overenthusiastic wall-dressing.) There are three possibilities. The dark soil area, a real constructional entity, may be the original feature, built upon a surface about the same as the modern one. The continuous line dipping from this dark soil area down would have to be accounted for as a trick of soil compaction and drainage. Otherwise, if this inferior area represents a still earlier structure, the original mound must have been built

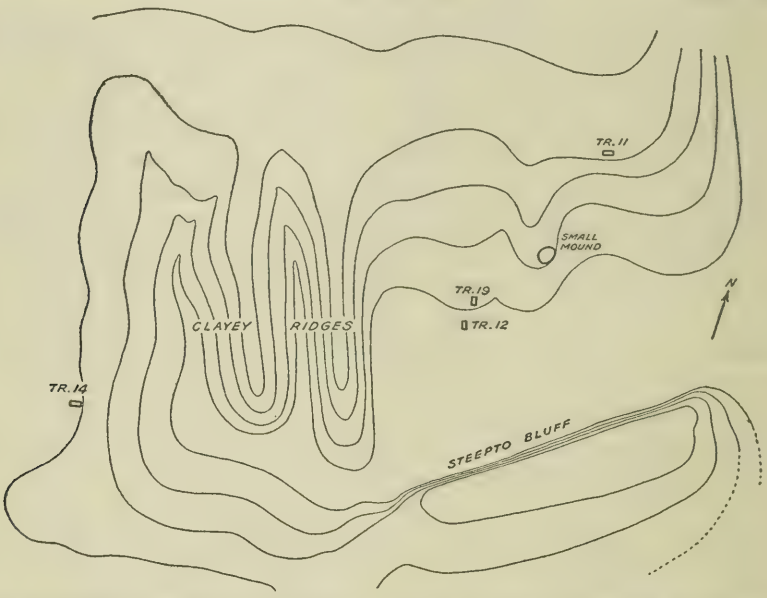

FIGURE 6.—Sketch of New Lands locality, showing trenches. Contours approximately 10 feet.

on a prepared—a cleaned-off—surface, or else, and this seems the most likely, the original mound was built during a period of rapid aggradation of the plain during which no well-defined humus zones were being formed.

New Lands trenches (*11*, *12*, *14*, *and 19*).—In the newly cleared milpas on the slopes of the plateau about halfway between Groups 2 and 3 there is a noteworthy concentration of surface sherds. It is clear that this locality had at one time been intensively occupied. Three test pits were spotted in, and as a result a stratitest was dug to provide controlled material for analysis (fig. 6).

The first test pit, trench 11, was dug 15 by 5 feet on the shoulder of the plateau, near the northeastern edge of the surface-sherd concentration. It was not particularly promising. The usual 11 or 12 inches of black soil with its acid-leached sherds overlay brown rather clayey dirt containing eroded sherds which at 32 inches in the east end and 38 in the west gave way to the sandstone country rock.

Closer inspection of the locality suggested that the deeper deposits must lie in the first cove itself at the foot of the plateau. Probing with a machete was sufficient to establish the fact that on the flanking ridges to the east a very thin layer of heavy black sherd-bearing soil covered sterile yellow clay of the same type as that forming the base of the Ranchito section.

Trench 12 was laid out 5 by 12 feet at the foot of the sherd-littered slope about 150 feet west-southwest of trench 11. Rich sherd-bearing deposit continued down to the water table at 102 inches. After 2 months of dry weather it was found possible to complete the pit to the sandstone which underlay the deposit at 120 inches. The material from this later operation in the pit (102 to 120 inches) was segregated and will be compared with low-level material from the nearby stratitest (19). The deposit in which trench 12 was put down was fairly uniform throughout—loose brown soil with a black humus cap 12 to 14 inches thick, and sporadic lenses of charcoal. The sand content of the deposit increased from 48 to 50 inches down. Animal remains were common. Sherds were numerous, large, and bright. No indications of postdeposition disturbances of the horizon were noted.

About 400 feet southwest of trench 12, on the rim of the main plateau above the little valley, another test pit, trench 14, was dug. A heavy black topsoil, containing a few eroded sherds, lay directly on the sterile clay at 10 to 12 inches. There was no real mix; presumably the sherds found there had been strewn over the surface and then trodden in during wet seasons. From this point on the plateau to trench 7 at the head of the Ranchito ridges no trace of deposit could be found, though occasional surface sherds could be seen.

On the basis of the leads furnished by the three pits a stratitest, trench 19, was laid out 35 feet from trench 12, up the slope from the latter to insure better drainage. As it turned out, a deeper section could have been obtained alongside of trench 12, by waiting until the increasing dryness had lowered the water table. Nonetheless, the trench cut through a bed of culture-bearing soil 86 to 90 inches deep. The deposits overlay the irregular surface of the country rock. The trench profile (see fig. 7; pl. p, fig. 1) shows the deposit at this point to consist of two none-too-well differentiated horizons. The uppermost, from the surface to 45 or so inches (varying from 45 to 48), was dark-brown mix, with sherds and organic matter, and containing small

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quantities of clay and sand. Nearly half of this stratum, the upper 20 to 22 inches, was humus-stained. At the base of the stratum lay patchy areas slightly lighter in color and more sandy. The maximum thickness of this irregular area on the west wall of the trench was 9 inches, at which point it merged into a layer similar to the topmost, but sandier. There was an appreciable scarcity of sherds in the 24- to 36-inch and 36- to 48-inch levels, with an increase correlated with the deeper sandy soil. In an earlier paragraph, it was remarked that this formation appeared to be a developing soil profile. The "patchy" 45 to 54 inches would correspond to the usually irregular broken

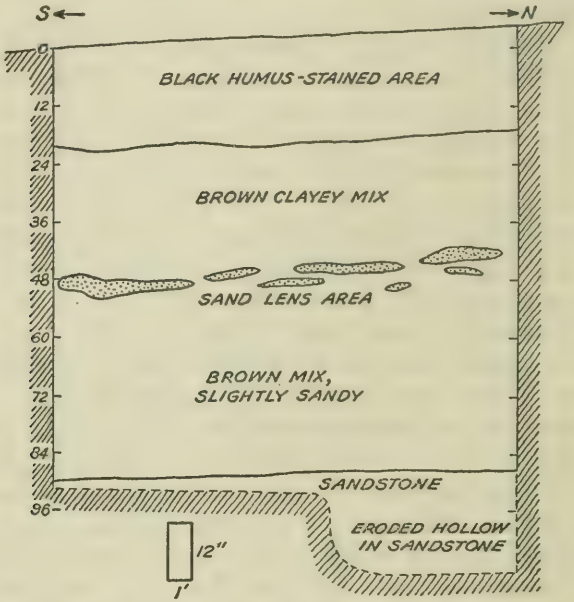

FIGURE 7.—Trench 19, profile (west wall).

transition zone between A and B horizons. The proof or disproof of this view should appear in the ceramic analysis. If natural soil processes alone are responsible for the present structure of the deposit, the ware-frequency trends should exhibit no irregularities at this point.

The surface of the sandstone below the deposit was heavily eroded. One steep-sided concavity angled south-southwestward from the northwest corner of the trench for 8 feet 4 inches, its width varying between 2 feet 3 inches and 2 feet 10 inches, and its maximum depth 21 inches (111 inches below the present surface). This was apparently an erosional, not a man-made, feature. It and lesser cavities were filled with mix indistinguishable from the rest.

Some traces of minor disturbances appeared in the cut. In the south end a circular pit 6 feet 6 inches across and filled with dark

rich-looking mix had its point of origin in the 36- to 48-inch level. Its bottom lay in the 60- to 72-inch level. The sherd material which it contained probably should have been segregated, but was not. In addition, several burials occurred. In no instance could the grave outline and its point of origin be determined, a fact suggesting that the interments must have been rather shallow originally. The first burial found was in the 36- to 48-inch level, in the southwest corner of the trench. It consisted of a mass of bits of decomposed bone, with no accompanying objects. The next occurred in the 48- to 60-inch level, diagonally across the trench from the first. This was an urn burial. The rim of a large thick-rimmed jar of Brown ware (see pl. 8, fig. 2) was uncovered at 59 inches. It contained, in addition, two fragments of adult human bone and teeth, the sherds of a large composite silhouette Brown ware jar, a small rectangular whetstone, a small cylindrical stone, a jade bead, and a retouched prismatic flake of obsidian. A short distance west of the urn burial, in the 60- to 72-inch level, was an interment, represented, as usual, by a little patch of bone splinters. Two small Brown ware bowls appeared to be associated. In midtrench, in the same level, a White-rimmed Black ware bowl was found which contained bone scraps and human milk teeth.

Group 3 trenches (*15*, *16*, *17*, *18*, *W*, *X*, *and Y*).—The little isolated mesa on which the mounds comprising Group 3 were situated was carefully investigated by surface examination and test pits. One mound-cut and a number of test pits were dug (fig. 8). The first test pit, number 15, was dug northwest of Mound 23, near the northern edge of the plateau. Surface sherds were plentiful in the vicinity. However, the cut, laid out 5 by 15 feet, showed a very shallow clayey layer of topsoil overlay sterile red-brown clay at a depth of 8 to 10 inches. Even in the topsoil, sherds were few and badly preserved.

Trench 16 was intended to section Mound 32, the next to largest mound at Tres Zapotes. The trench was laid off 20 feet wide up the front (southern) face of the pyramidal mound, and a wing was driven in for a short distance along the narrow platform at the base from the main trench to the southwestern corner. The main cut was divided into seven steps between 5 and 6 feet high at the head, which were to be taken down one after the other beginning at the top. However, the heavy clay of which the mound was built made it impossible to complete the section, for the walls dried and cracked back a foot or so and then slipped off. At about 18 feet below the peak of the mound, operations were suspended.

The most interesting feature revealed by the cut, as far as it was carried, was the evidence of at least one major enlargement of the mound. At about 10 feet below the crest (exact measurements were not made immediately and the profile was lost in a cave-in) the top

of a horizon of brown clay soil appeared. It was readily distinguishable because it contrasted sharply with the bright red-brown clay of the present mound-face. The brown clay ran nearly horizontally for about 20 feet (not conforming to the slope of the outer facing). Then it dipped nearly vertically for about 4 feet, leveled off for 8 or 10

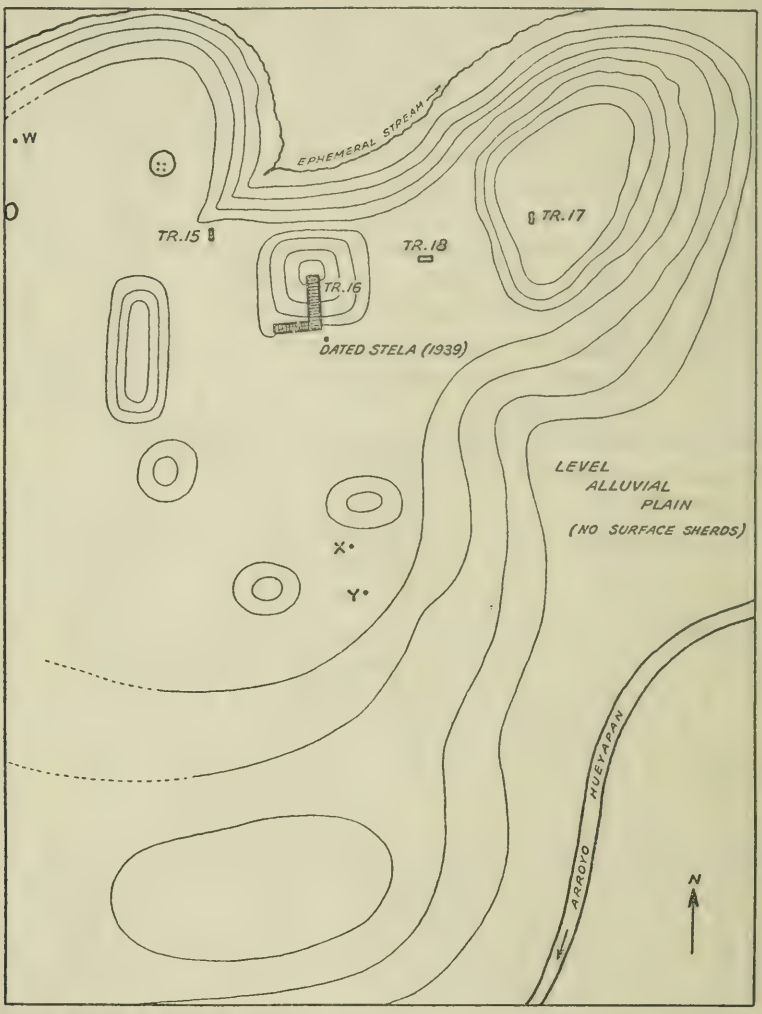

FIGURE 8.—Sketch of Group 3, showing mounds and trenches. Contour lines about 10 feet.

more, dipped again, and then leveled off. The appearance was thus that of a stepped pyramid covered by an inclined (unstepped) facing. The failure to complete the trench made it difficult to determine whether the two strata represented different periods of mound construction or whether the "steps" merely represented a mode of construction of a mound built as a unit. A rough segregation of the

rather sparse ceramic materials from the two strata was made. As will be seen, the sherd content of the layers very definitely suggests that there were two periods of building activity.

Trench 17, dug on the flat-topped knoll, some 300 feet east of the summit of Mound 32, yielded nothing but a handful of sherds at or just below the surface. Sterile red clay, which gave no indication of ever having been disturbed, appeared 5 to 6 inches down.

Trench 18 presented a different picture. Archeologically speaking, it is of little importance, but will be described briefly to bring out certain factors that affect evacuation in the Tropics. The test pit was laid out 5 by 15 feet in the level plain between trenches 16 and 17. The soils through which it cut consisted chiefly of the bright reddish-brown local clay, with admixtures of other materials: chunks of nearly decomposed sandstone, lumps of other clays (yellowish red, yellow), and small amounts of cultural material, chiefly sherds and charcoal. The two major strata differed chiefly in the amounts of these materials each contained. While traces of cultural material occurred to a depth of at least 160 inches (the maximum depth of the trench), it can be shown that human activity affected the deposit only indirectly, by providing these materials, and had nothing to do with the present structure of the formation. The uppermost layer, from 0 to 63 inches, consisted of red clayey soil with a few sherds (the surface 10 or 12 inches were discolored by humic intrusions). This must represent slope wash from the mound on one side of the knoll to the other. At 47 and again at 54 inches below the surface, more or less horizontal dark lines just under an inch thick crossed the section. Unfortunately, I did not take samples of them, so cannot say whether they are old humus lines or, as seems more likely, zones of precipitation (of iron hydroxides, a process that leads eventually to the formation of the tropical lateritic red earths). It is possible, of course, that slight decreases in the erosive cycle (and aggradation on the little flat) permitted enough of an accumulation of humus to discolor the soil at these points. Beneath the red clayey soil lay red clay, with the admixtures previously described. Sherds, bits of charcoal, lumps of yellow clay, and chunks of rotten sandstone were mixed in without the slightest trace of an orderly arrangement, to the depth previously mentioned, and undoubtedly beyond. From 100 to 107 inches were dark patches, areas of precipitation. Very clearly the mixed condition is due to the mechanical mixing resulting from a natural process: the "clay flat" type of cracking and closing in wet and dry seasons (cf. Vageler, 1933, p. 178 ff.). This process must have continued until unusually heavy aggradation provided a coating of more elastic soil—the base of the present 0– to 63–inch fill.

W, X, and Y were not regular trenches, but prospect holes dug in places where the appearance of the surface soil and surface sherd concentrations suggested there might be occupational deposits. In none of these tests was a sherd-bearing horizon more than a few inches deep found.

In short, Group 3 was characterized by a peculiar dearth of occupational material. The previous season's discovery of a fragment of a stela bearing a Baktun 7 date in front of the main mound of this group suggested the possibility of deep refuse deposits in the locality. However, no accumulation of any consequence could be found anywhere thereabouts. Either the plateau was used only for the ceremonial purposes for which the mounds were built, and never intensively occupied, or most of the occupational deposits were scraped up to be used in building the mounds. The latter hypothesis, speculative as it may be, seems the more likely of the two. The uncompleted cut in Mound 32, the major mound of the group and the one in front of which the re-used stela was set, yielded a heterogeneous lot of ceramic material which suggested that it was composed of mix from several refuse horizons. It is almost inconceivable that the building operations responsible for the mounds and other features should have been conducted so methodically as to leave but a few scraps of undisturbed deposit. Yet the many thousands of yards of red clayey dirt of which the mounds are constructed must have come from somewhere, and there are no perceptible borrow pits. Presumably, the material for the mounds was scraped off the surface over a wide area.

Laguna trenches (20 and 21).—Trenches 20 and 21 were dug by Stirling on the border of the "laguna" at the southwest end of the village of Tres Zapotes in order to determine the associations of a quantity of figurines which local people had found there. The objects had been excavated by some children, who with machetes had dug a single small pothole about halfway down the slope forming the laguna border. This richly yielding discovery pit was enlarged to form trench 20. It was found that the ceramic materials were not uniformly distributed along the slope, but occupied a restricted area along the slope to a maximum depth of about 3 feet, beneath which lay the sterile clay subsoil. Presumably, a small depression, or gully, was filled with the sherds and broken figurines. The most of the figurines were concentrated in a narrow lenticular-shaped area 10 feet long by 3 feet wide and 1 foot thick, which lay about a foot below the surface. There was no evidence that the filling-in extended over a period of time; the vast quantities of sherds piled one on the other suggested that the pocket may have been formed quite rapidly. The figurine concentration suggested deposition in a brief time interval, or

even one formed all at once. One is reminded of the Aztec cycle-ending dumps described by Vaillant (1936, 1938). It seems as though the discovery prospect had tapped a concentration of figurine material. A number of figurines and fragments of the same type were found in the trench, but not nearly in such quantity (and this despite the greater area covered by the trench). However, the associated material obtained from the trench enables us to place the deposit with some surety in the local ceramic column.

Trench 21 was dug 50 feet west-southwest of trench 20, in what appeared to be a more normal type of deposit. It was about 10 by 10 feet, and had a maximum depth of 2½ feet. The deposit lay on heavy clay, beneath which was the local sandstone. The contents of the deposit paralleled those of trench 20, with the exception that there were far fewer figurines and a larger proportion of Unslipped Olla sherds and other utility wares.

Burnt Mounds Group trenches (23, 24, 25, 26, 27).—The irregularly spaced group of small mounds in the valley plain between Group 2 and the arroyo were tested by means of two mound-cuts, a test pit, and a stratitest (fig. 9). From a stratigraphic point of view, the most spectacular results of the season came from this locality. Two of the trenches, 24 and 26, disclosed deep and obviously early sherd deposits isolated from the mounds and the material they contained by a partly consolidated layer of volcanic ash, or tuff, 1½ to 2 feet thick. The first in the group, trench 23, was laid out 15 by 30 feet east-west to section a small mound 6 or 7 feet high, with steep sides and a flattish top. The trench extended westward from the east edge of the mound. It was not carried down far enough to determine whether the ash horizon underlay this mound also. The mound appeared to be a unit structure. There was no discernible evidence of more than one building period. The base of the mound lay between 3 and 4 feet below the modern surface of the valley floor, indicating rather heavy aggradation since the original construction. In addition to the sherd and figurine material which the mound contained, several fragmentary burials were encountered, and one highly spectacular cache (pl. 9, fig. 1). One of the burials had 3 loop-handled incensarios and a bowl of thin Red-slipped ware over the feet. The cache lay about 6 feet deep at a point 15 feet in from the east edge of the mound. It, therefore, was situated in the mound mass but below the surface of the present plain. The cache consisted of a pile of elaborate figurines neatly covered with inverted bowls and dishes. The highly significant association of ware and figurine types in the cache will be described in some detail further on in the report.

Trench 24 was dug in another small mound about 100 feet east of trench 23. The cut was laid off slightly off the east-west line, 40 feet

long by 10 wide. It turned out to be not only a mound-cut but a stratigraphic section as well, and thus is of especial importance. In addition, the principal collection of Polychrome sherds obtained in the 1940 season, and that on which an important part of the present ceramic typology is based, comes from this trench.

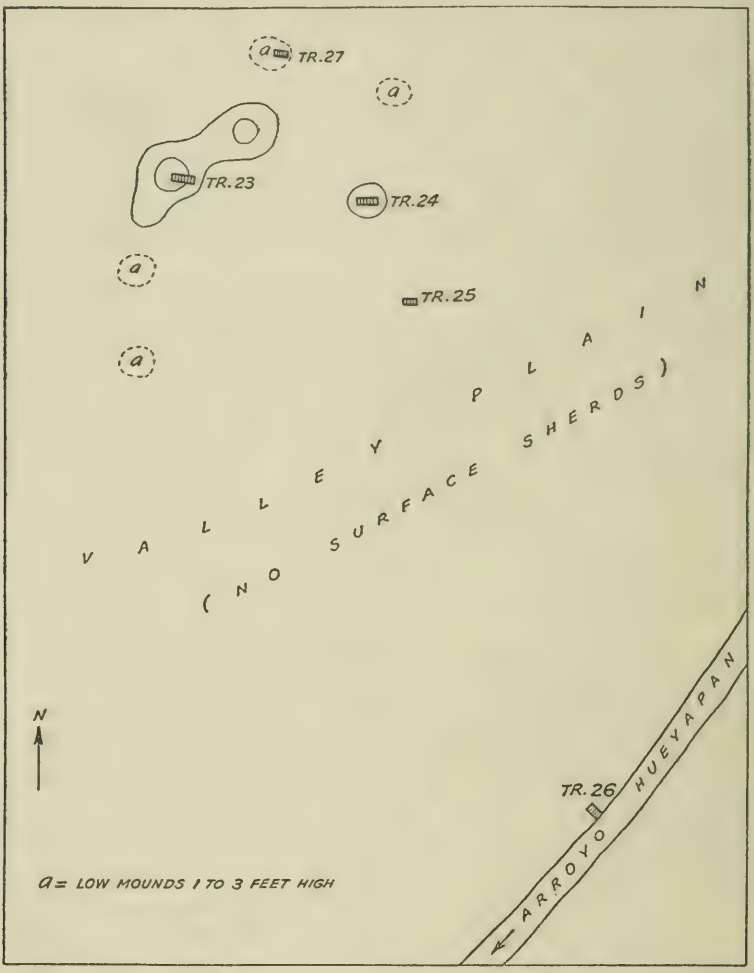

FIGURE 9.—Sketch of Burnt Mounds Group, showing mounds and trenches. Contours approximately 5 feet. Trench 24 to trench 26 approximately 500 feet.

Although the mound rises little more than 4 feet above the present surface of the valley floor, the cut showed 90 to 91 inches of mound material. The base of the structure lay over 3 feet below the level of the plain. The mound appeared to be a unit structure, composed of dark-brown clayey soil rich in sherds. Significantly the height of the mound was 90 inches at its peak and 91 inches at a point 10 feet to

the east; it had been erected on the edge of a slight knoll, since buried, on an older plain surface. (See fig. 10.) This knoll was composed of light reddish-brown sandy soil, containing a very few sherds. A small test, 10 by 3 feet, dug in the northeast corner of the trench cut through 29 inches of this sandy material in the east end, 40 inches in the west (toward the peak of the elevation). A layer of consolidated ash formed the base of the knoll. The ash horizon ran level (by eye) along its contact with the sandy soil beneath the mound; its under side dipped westward 8 inches in the 10 feet of the test, making the thickness of the stratum vary from 16 to 24 inches. It thus appeared to cap a low elevation which did not conform to either the natural or artificial ones above. The sub-ash formation was a dark-brown mix, containing both sand and clay as well as organic matter and sherds. This isolated-capped culture layer is of tremendous significance to the history of the Tres Zapotes site. Unquestionably sealed off from the ceramic complex represented by the sherds from

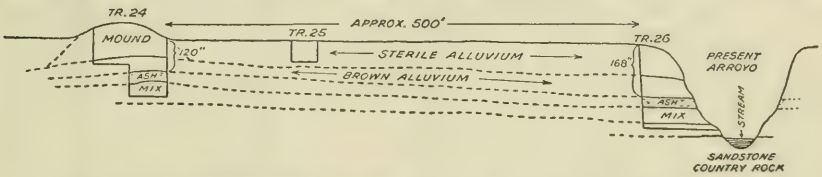

FIGURE 10.—Schematic section from trench 24 to trench 26. (Not to scale.)

the mound structure, the sub-ash material gives us the opportunity to analyze a pure horizon which by its stratigraphic position must have been relatively early.

It seems anticlimactic to report that the test in the corner of the trench was not enlarged and completed to the bottom of the deep sherd layer. However, because of the danger of upper-level material falling in during the enlarging process, and since a more accessible locality for digging the deep stratum had been found (trench 26), the pit was abandoned after a small sherd sample and samples of the ash and soil horizons were taken.

Trench 25 was a test pit 5 by 10 feet dug about 120 feet south-southeast of trench 24. It was put down 4 feet in a soil of the same character as that separating the mound material from the ash—a reddish-brown sandy deposit. Not a single sherd was found, nor was there an old soil line which could be associated with the mound. This partly bears out the view suggested by the mound profile—that it (and presumably the others of the group) were built on an elevation in the now nearly level plain (fig. 10).

Some 500 feet south-southeast of trench 24, the arroyo has cut through the deep sherd horizon and its volcanic ash cap. The present bed of the stream is several feet below the base of the sherd level, on

the country rock. A place where the arroyo bank was the steepest was selected for trench 26. A bar-dot numeral, carved in the country rock, was visible under the water about 35 feet upstream. Beginning at the top of the bank, 13 feet of overburden were stripped off down to the ash, and the outer (arroyo) face of the deposit was dressed to form a vertical face and to preclude possible intrusion of late materials. The area of the cut after these preliminaries was 160 square feet—10 feet wide by 16 feet into the bank. After removal of the ash, the deposit was dug in 12-inch levels.

The depositional profile at the head of the trench was as follows (see fig. 11 and pl. 7): The present surface of the plain dipped 13

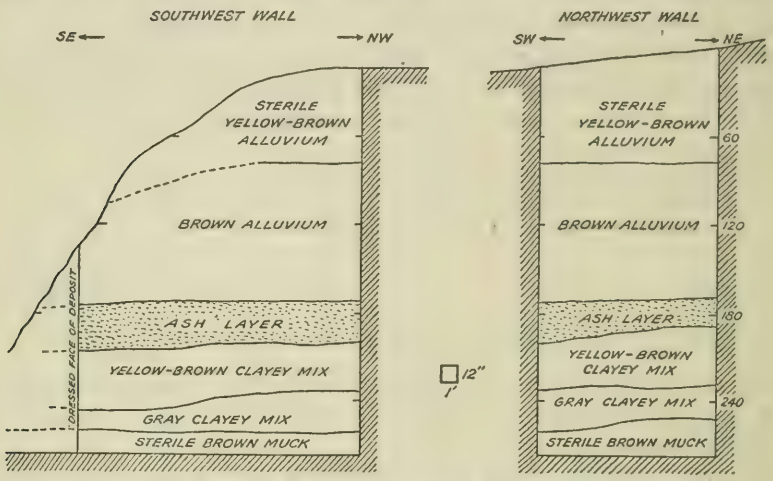

FIGURE 11.—Trench 26, profiles (southwest and northwest walls).

inches from east to west across the 10 feet of the cut. The uppermost layer consisted of reddish-brown sandy soil, completely sterile of cultural material, which extended to 78 inches deep on the east and 66 inches on the west side of the cut. Beneath this lay a slightly darker layer, also sandy, in which a very few scattered sherds occurred. Both these strata had the appearance of alluvial deposits. The contact of the two layers formed a nearly level line. The second stratum overlay the ash formation at a point 160 inches (13 feet 4 inches) from the surface on the west and 168 inches (14 feet) deep on the east side of the cut. The ash thus dipped slightly (5 inches in 10 feet) to the west. The upper edge of the "ledge" was fairly well defined because of its distinctive olive-brown tone; yet the particles were not well consolidated in the upper 3 or 4 inches. The layer became increasingly harder from this point down. The ash of which it was composed was quite fine and showed some lamination. (See pl. 7.) A few leaf molds were noted in some of the samples taken. This was a layer of ash which was subsequently consolidated. Color, texture,

and the layering indicated that this horizon was identical to that found deep in trench 24. The lower surface of the stratum was rather irregular; in addition to its general westward dip, it filled minor hollows in the surface of the deposit which underlay it. The ash layer was 21 inches thick in the northeast corner of the cut, where its base lay 189 inches below the surface; in the west side of the cut it was 28 inches thick, and 188 inches from the surface, 201 inches below the point of measurement at the surface of the northeast corner. The culture-bearing mix consisted of two layers, both with a heavy clay (or converted ash) content. The upper, 39 inches thick at the east edge and 33 inches on the west, was of a dark-brown clay, with numerous sherds. The contact line between this and the lower zone was nearly level, and was the point at which percolation of soil water began. Below this line was a steel-gray clayey mix 23 inches thick in the east and 26 inches in the west edge of the cut. There were scarcely any sherds in the uppermost portion of the gray soil, then they became plentiful, and large and crisp-looking as well. Below this stratum lay a sterile dark-brown clay. After digging about 12 or 14 inches into this layer, intrusion of soil water made further digging impossible. The bottom of the cut lay about 2½ feet above the (April 1940) surface level of the stream in the arroyo. It should be mentioned that both the animal bone and the few human remains encountered (at 237 to 249 inches, measured at the northeast corner) were heavily replaced. Like the ash, the upper zone of the deposit was identical in character with the member found below trench 24.

Trench 26 is important on several counts. First of all, it shows that the ash-capped cultural deposit encountered in the depth-test in trench 24 was not of localized occurrence, but was part of an extensive deposit, covering a wide area in the valley plain. The ash layer hermetically sealed it from any later intrusions. The fact that no ash was encountered in or beneath deposits in higher situated localities is probably to be accounted for by the fact that the relatively thin ash fall (as such deposits go)[12] would readily be washed off the upper slopes and terraces while in its light new-fallen state.[13] It is obvious that these latter places are subject to heavy erosion. As a matter of fact, there are today no traces of ash layers on or near the surface attributable to the 1793 eruption of San Martín, which spread quantities of ash and dust as far as Oaxaca (Moziño, 1913, p. 108, et passim). The latest event, physiographically speaking, was the recent channel cutting forming the modern arroyo, whose "new" appearance has been commented on elsewhere. During most of this

[12] Cf. the 40-some feet of ash (overlying cultural remains) from the Volcano Ilopango, El Salvador (Lothrop, 1927, p. 170, et passim).

[13] This opinion was expressed as a likely possibility by Dr. W. F. Foshag, of the U. S. National Museum, who was kind enough to identify samples of the ash layer.

time, however, the Tres Zapotes site seems to have been occupied. The population must have moved up on the slopes and terraces after the inundation of the plain, then moved back down to build the mounds after the plain began to fill in. It is quite difficult to estimate the time interval represented by all these changes in the local landscape. However, the formation of so extensive an occupational deposit, the laying down of the deep upper-soil layers, and consolidation of the volcanic-ash stratum suggest the passage of a moderate period of time. We have a possible clue in the numeral carved in the arroyo bed, as will be brought out later on. This feature obviously could not have been made during the period of sedimentation and filling of the plain. Nor could it have been made since the cutting of the present arroyo, at least, by a people not equipped with diving helmets—a good 3 feet of water covered it in the abnormally dry season of 1940. The carving, therefore, must be associated with the period of the buried occupation zone.

Trench 27 was a 10- by 20-foot cut put into the low partially buried mound lying northeast of trench 23, in the hope of encountering either a rich cache of the sort found in that trench or well-preserved decorated sherds such as those from trench 24. It proved rather unproductive, however, and was abandoned before completion.

CERAMIC TYPES FROM TRES ZAPOTES

A typologic description of Tres Zapotes pottery must be prefaced by a statement of the purpose which it is intended to serve. A classification useful for stratigraphic analyses of necessity may be different from one adapted for wide-range comparisons of ceramic complexes. The former sort must be inclusive; it must be broad enough to permit segregation of most if not all the sherds excavated from a site. The latter, meant to be applied to a highly selected body of material—complete and restorable vessels, chiefly—may be based on minuter differences, ones by means of which only a small percentage of a sherd collection could be identified. I do not mean to question the validity of such classification nor the end at which it is aimed. The point is simply that materials from the same site may be classified in different ways, into a few gross divisions or numerous refined ones, depending on the use to which the classification is to be put. Herein lies the difference between Weiant's classification and the present one.

Sherd analyses are made difficult in the Tropics by climatic factors, such as the alternating saturation and drying out of the ground in wet and dry seasons, and the heavy acid content of the soil, which reduce many sherds to pitted drab lumps of baked clay. When in addition it happens, as at Tres Zapotes, that many of the paints used on pottery were perishable (either vegetable in origin or imperfectly

fired) so that usually but few traces of pigment remain, it is easy to see why designs and decorative motifs have little value for the classification of unculled lots of pot fragments. Under these circumstances such criteria must be relegated to low rank, the equivalent of varietal or subvarietal diagnostics in biology. They should be, and in the present study will be, utilized wherever possible, but main reliance must be placed on such characters as slip, vessel shape, and paste. For present purposes a "ware" may be defined as a ceramic group in which these three criteria (slip, vessel shape, and paste) occur most frequently associated.[14] While this definition of a ware does not allow very refined classification, it has the merit of dividing the rather varied Tres Zapotes ceramics into several distinct groups which appear to have meaningful vertical distributions. This is after all the test of a classificatory system, which should be a tool, not an end. A classification that does not classify the greater part of the material, or one that does not yield intelligible results (in the present type of study, clean-cut vertical and/or horizontal distributions), is worse than useless, for it obstructs historical interpretations. If a simplified classification works consistently, and yields meaningful distributions, it must be considered the truer and more accurate one. The old saw about the proof of the pudding is as applicable to archeological methodology as to anything else.

Before embarking on a description of wares, it must be understood that "Tres Zapotes wares" is to be used throughout this paper to refer only to the pottery integrally associated with the refuse deposits and mounds of the site. The term does *not* include the material from the intrusive Soncautla complex. In view of the well-established stratigraphic relation of the latter wares to those of the deposits there can be no doubt as to chronological relationships of the two complexes. The main problem is conceived to be that of determining the sequential relationships of the wares not thus depositionally isolated. In short, the unconformably later position of the Soncautla pottery automatically segregates it. It must be owned that this exclusive treatment is in part compelled by the very small sample of Cremation Burial remains found in 1940, but is nonetheless justifiable. The 1940 examples of this complex will, of course, be described, and compared with the Tres Zapotes wares.

According to the foregoing definitions, Tres Zapotes ceramics (excluding figurines etc., which are described later) resolve themselves into six major categories, or wares, three of which are each constituted by several subtypes. These wares are as follows: Polychrome ware (with several subtypes), Coarse Paste Brown ware (which includes

[14] The occurrence of an occasional hybrid, e. g., a vessel form typical of one ware done in the paste and slip of another, does not vitiate the entire classification, nor should such ceramic freaks be given rank as independent wares.

Red, White, and Red-and-White Bichrome as subtypes), Polished Black ware (also containing several groups of lesser order), Incensario ware, Comales, and Unslipped Ollas. One interesting type, Lost-color ware, known from the 1939 excavations, unfortunately did not occur (in a recognizable state of preservation at least) in the 1940 stratitests. The wares will be described in the sequence given above.

POLYCHROME WARE

Polychrome is one of the Tres Zapotes wares in which paste type and vessel form are the signal ware-determinants. Several slips, Cream-white, Buff, Gray, Orange, and Smoked Black, are found on sherds of this group. Since but one of these slips duplicates that of another ware, and the distinctive paste-vessel shape combination is restricted to the members of this category, it is evident that we have to do with a distinct technological unit. It is assumed that a ceramic class based on technological unity is a more real functional entity than one based on slight differences in color of slip or decoration.

To some extent the designation of this ware as "Polychrome" may be a misnomer, for it is not certain that all these vessels had painted decoration. Indeed, there are but few painted examples of the Gray- and the Orange-slipped, and Smoked Black subtypes in the collections, and even some of the Cream-white-slipped specimens show no trace of paints at present. Since, however, the paints used were not permanent (being either of vegetable origin, or imperfectly fired on), their original presence or absence is impossible of proof, and cannot be used as a first-line determinant. Many painted sherds show little more than a faint smudge or trace of their once brilliant patterns. To segregate the sherds on the basis of present occurrence or nonoccurrence of painted design would give a measure of better or poorer conditions of preservation in the deposits, not of variation in the aboriginal pottery-making complex.[15] Consequently it becomes necessary to lump all the technologically related examples into one category.

PASTE

The paste used for Polychrome vessels is an extremely finely divided, compact clay, with no visible temper (very rarely sherds, otherwise conforming to these standards, contain a few bits of sand, perhaps accidental inclusions). The appearance of the paste suggests it may have been made of the fine yellow (volcanic?) clay that overlies the

[15] As a matter of fact, sherds from the stratitests that still retain their original painted designs form an incredibly low proportion, probably less than 1 percent of the total, *not* of all sherds from the cuts, *but of this technological class alone.* Most of the painted examples come from mound-cuts, probably because of better drainage conditions.

country rock over most of the site. The characteristic color is a bright orange (9′*b*, flesh ocher, to 9′*i*, ferruginous, to 11′*i*, cinnamon-rufous), often with a gray (21′′′′d, smoke gray) core. In the Gray-slipped examples, the entire sherd is usually of this gray color, suggesting a firing sequence of this clay from orange to gray; the gray sherds may in some cases, at least, be merely overfired pieces. A small proportion of sherds lack the reddish tones of the orange, and are consequently buff (13′′*b*, vinaceous-cinnamon, to 15′′*b*, pinkish cinnamon) in color. Often these have a Buff slip. Smoked Black forms of this ware are orange to brownish gray under the surface layers. A fair number of sherds show occasional small holes parallel to the vessel wall. These may represent imperfect coil joints.

Sherds of this paste are characteristically quite hard, and tough as well. A correlate of this fact is that the sherds, even of vessels of moderate size, tend to be thinner than those of other wares. The average wall thickness of quite large bowls ranges from 5/32 to 1/4 inch. Surfaces were almost always well smoothed before the slip was applied.

VESSEL SHAPES[16]

While there is some variation in the vessel forms in this ware, the significant characteristic of the group is that composite silhouettes definitely never occur. The two other numerically predominant wares, Brown and Polished Black, have along with simple shapes a moderate but constant number of composite silhouette forms.

Bowls.—A common Polychrome bowl has a flat base, flaring side, curving everted to flat everted rim (figs. 12, *a* to *m;* 15, *a* to *d;* 16, *a*, *j;* pls. 10, 11, 12). The cascabel and hollow slab feet in this ware in many cases belonged to bowls of this form, though many of the bowls were legless. Some vessels of this form with flat everted rims were probably dishes rather than bowls. They differed from the bowls in no respect save that of wall height, however.

Another form has an open, curved side, simple direct rim (figs. 13, *a* to *c;* 15, *e*, *f;* 16, *h*, *i*). This is a common shape in Polychrome ware in all varieties of slips. A very typical Gray slip variant has very thin walls, three cascabel, or solid ball feet (fig. 17, *j* to *l;* pl. 15, *d*, *e*). Footless forms in Cream-white and Buff slips were likely mostly flat-bottomed.

Bowls with sharply incurved sides, and heavy incurved rims form one of the distinctive shape classes of this ware. The walls flare outward in a gradual curve, then are sharply inturned, and thickened to

[16] The functional forms of vessels, bowls, dishes, jars, etc., have been classified according to Ricketson and Ricketson (1927, pp. 228–229). This is a simple, clear classification, and safe to use so long as one remembers that, in working with sherds, small bowls and large dishes, and some forms of bowls and low jars are not easy to distinguish. Errors of sorting deriving from this circumstance, however, are probably not significant.

form the rim. In a few examples the turn has been accentuated to a sharp angle (fig. 15, *i*). Typically, the rim is thickened, either to a bevel, or a heavy interior roll (figs. 14, *a* to *j*; 15, *g* to *k*; 16, *b*, *c*). No complete or restorable vessels of this shape were recovered, but they probably had flat bases.

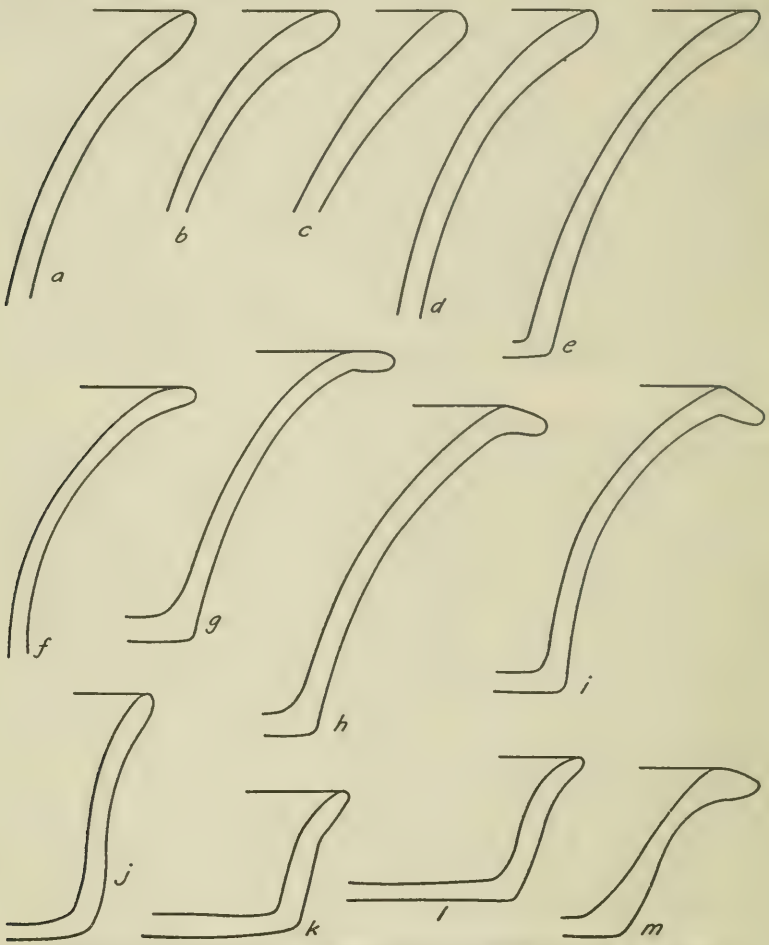

FIGURE 12.—Polychrome (Cream-white slip) flaring-side bowls and dishes.

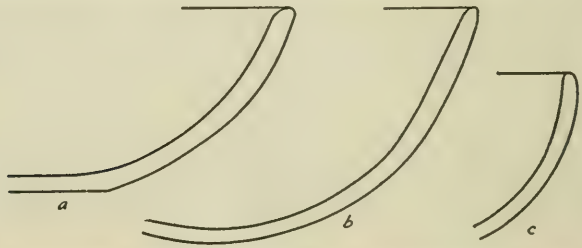

FIGURE 13.—Polychrome (Cream-white slip) open curved-side bowls. *a* has a flat base.

Spouted vessels.—No restorable vessel of this form has survived, but numerous spouts in this ware occur in the stratigraphic materials. Apparently the vessels were rather squat, with incurved sides, and short vertical necks. Both long and short spouts occur. Distinctively, the spouts were of the supported type. The supports vary from roughly shaped pegs to well-finished ribbons of clay wider than the spout (fig. 18, *a* to *g*). A very few unsupported spouts occur in this ware.

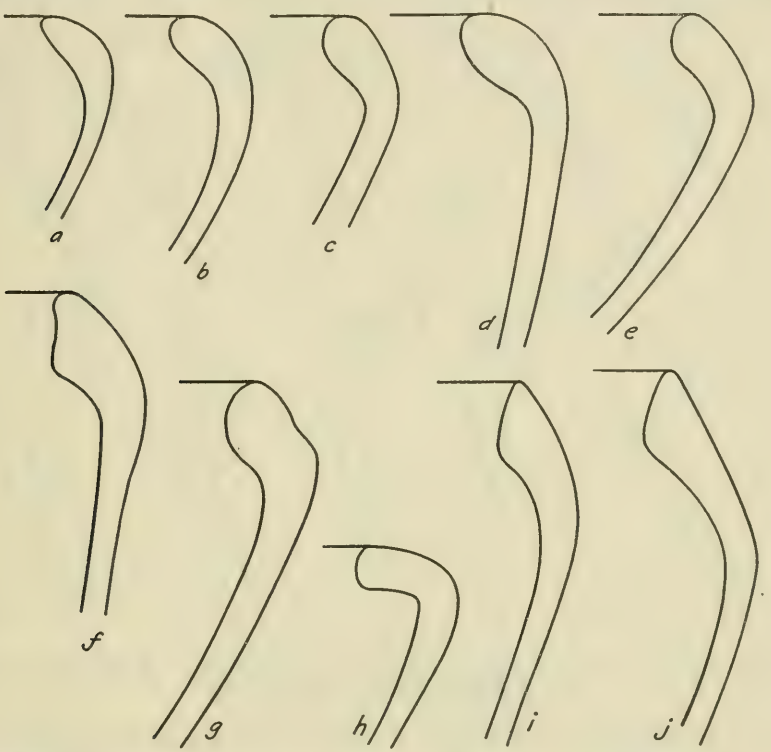

FIGURE 14.—Polychrome (Cream-white slip) sharply inturned side bowls with heavy rims.

Gadrooned vessels.—A few sherds, apparently from bowls with both curved and incurved sides, are known in this ware only. No complete examples of this form were recovered in 1940.

Vases with annular base.—This form type does not approximate the tall slender Fine Orange shapes, as defined by Vaillant (Merwin and Vaillant, 1932, p. 80), but is much nearer that of a Cerro Montoso Polychrome type illustrated by Strebel (1885–1889, vol. 2, pl. 9, 13). This is *not* a typical Tres Zapotes Polychrome shape, and is mentioned only because one restorable pear-shaped vase with an annular base (a typical Fine Orange form) was recovered in 1939 (pl. 24, *c*), and a fragment of a similar annular base was found in 1940 (trench 1).

Ollas.—The ollas made in this Polychrome ware are distinctive in their rim shape. The necks, as in most other Tres Zapotes ollas, rise sharply from the body of the vessel, and are usually vertical to slightly flaring. Rarely, a neck will show a gentle convexity between body joint and base of the rim. The rim usually flares outward, and is finished in an accentuated outward bevel (fig. 19, *a* to *c*). Both short and medium length necks occur. There are no ridged, grooved, etc., necks in this ware. A unique type of olla, of which there are one restored and several fragmentary examples in the collection, has a sort of hood

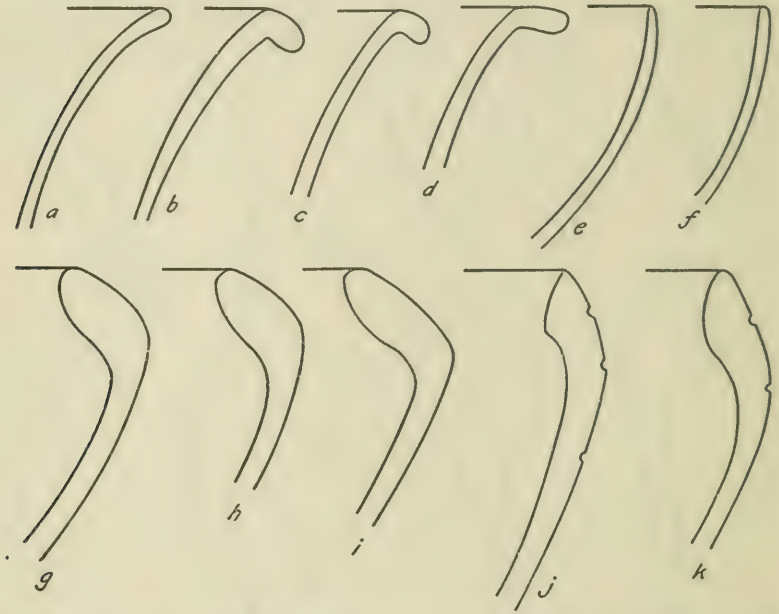

FIGURE 15.—Polychrome (Gray slip) bowls. *a* to *d*, Flaring side; *e*, *f*, open curved side; *g* to *k*, sharply inturned side, heavy rim.

over half the mouth. The hood is modeled into the head of a man or animal (pls. 12; 11, *f*). It is possible that these "hooded" ollas had spouts, as did a 1939 miniature specimen (pl. 19).

To judge by miniature Polychrome ollas, the body of the vessel was nearly globular in silhouette, with a small flat area for a base. A few of these ollas have a face design on the neck (pl. 18, *a*). The eyes are indicated by circles stamped probably with the end of a cane or bamboo, which, as will be brought out, is a later technique at this site than the punctate method of indicating faces.

Miniature vessels.—Miniature vessels were made in some numbers in Polychrome ware. Whether they were toys or had some ceremonial function cannot be determined. The most common form of miniature Polychrome vessel is the olla, which in neck and rim duplicates the

full-sized specimens (pl. 18, *b* to *d*, *f*, *g*). A few bowl forms also occur. Commonly, a tiny round-bodied returned-rim vessel has two holes below the rim on opposite sides, apparently for suspension.

Drums (*?*).—A peculiar form, of which there are several examples, is that illustrated in plate 11, *c*, *d*. It is essentially a tube with a swollen central portion, and expanded foot. The bottom is not closed. These objects might have been drums; the flanged rims would serve for binding on heads.

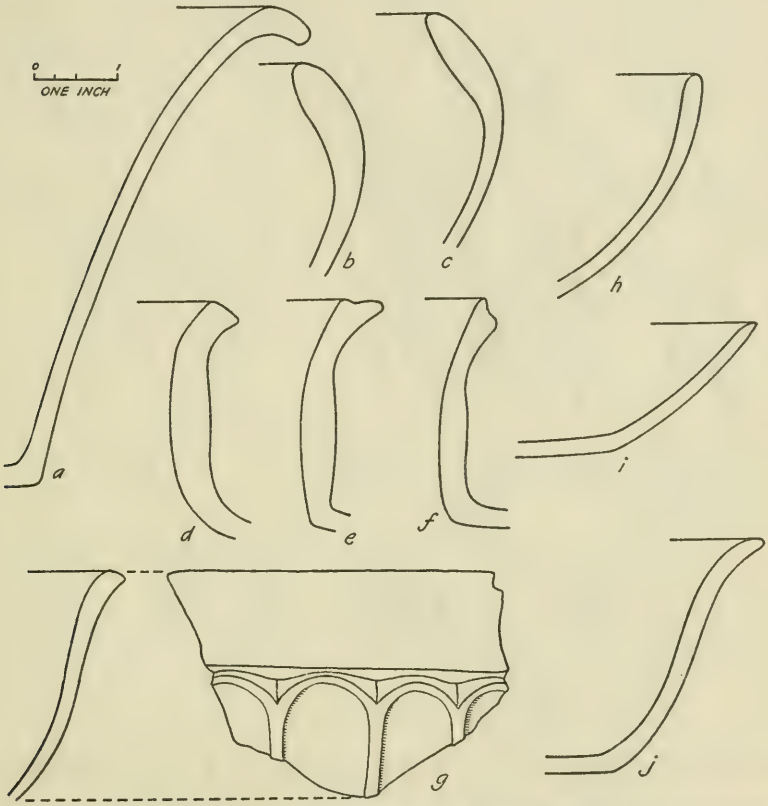

FIGURE 16.—Orange-slipped Polychrome vessels and Smoked Black Polychrome vessels: *a*, Flaring-side bowl; *b*, *c*, sharply inturned side, heavy-rim bowl; *d* to *f*, olla necks; *g* to *j*, Smoked Black Polychrome vessels: *g*, fluted bowl; *h*, *i*, open curved-side bowls; *j*, flaring-side bowl.

Pot lid.—One fragmentary pot lid was recovered (trench 19) made of a fine-grained buff paste of the type used for Polychrome ware. No vestiges of slip remain, unfortunately, but the object probably belongs in the Polychrome group. The lid itself is of scutate form, vaguely reminiscent of both Teotihuacán and Holmul pot lids but the mode of decoration differs. (Linné, 1934, figs. 21, 28, 29, etc.; Merwin and Vaillant, 1932, passim.) The lid is (or rather was) surmounted

by a figure partly in the round and partly in relief. That is, the figure was sitting on the lid, with hands, feet, and a long curled tail in relief; the rest of the body consisting of a hollow probably mold-made figurine attached at these points (pl. 33, *r*). The figure might have represented a monkey, or perhaps a partly anthropomorphized jaguar-being.

Effigy vessel.—A portion of a spouted vessel from trench 24 had the body fashioned into a conventionalized seated body of a man or beast

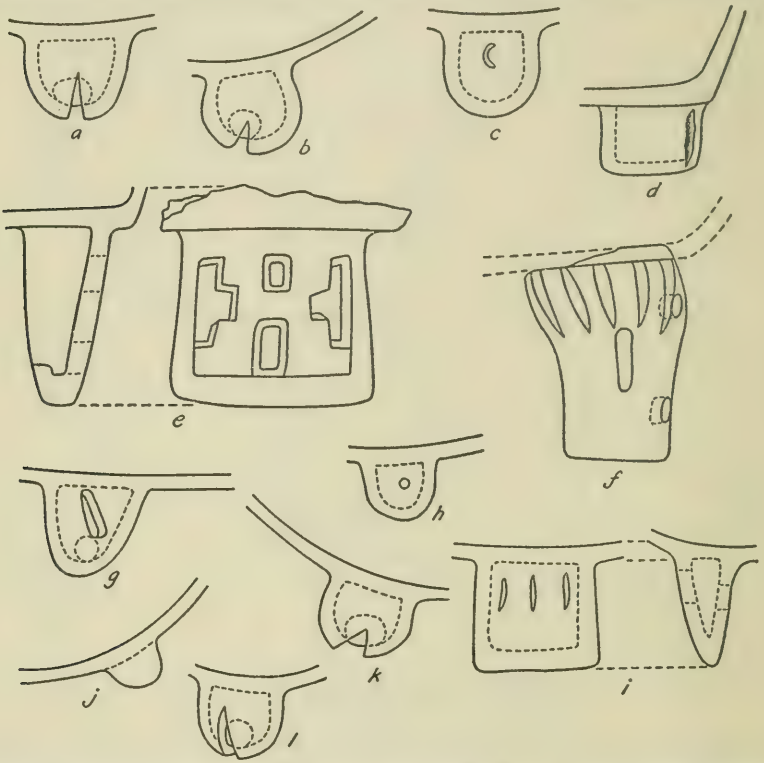

FIGURE 17.—Polychrome supports. *a* to *d*, Cream-white slip; *e*, *f*, slip eroded, indeterminable; *g*, Buff slip; *h*, *i*, Orange slip; *j* to *l*, Gray slip.

of some sort. The legs are indicated along the sides, partly flexed, and are outlined in red paint (pl. 11, *e*). Identification of the species is not possible. This vessel form is unique in local ceramics.

Handles, feet, and legs.—Handles, unless the supported spouts secondarily served as such, are very uncommon. A few loop handles seem to be of this ware. No strap handles occur.

The collections contain a number of what seem to have been horizontal animal-head lugs, most often representing monkeys (pls. 37, *r*; 38, *e*, *f*, *g*). They seem to have been attached at the rims of rather small vessels, perhaps ladles or cups. The face is turned upward. It

is often well-modeled. The eyes are usually perforated clear through to the hollow interior of the lug. Unfortunately, we have no complete vessels of this type.

The cascabel legs and hollow slab feet found on some bowls have been mentioned. Short cylindrical hollow feet also occur. Solid feet, both

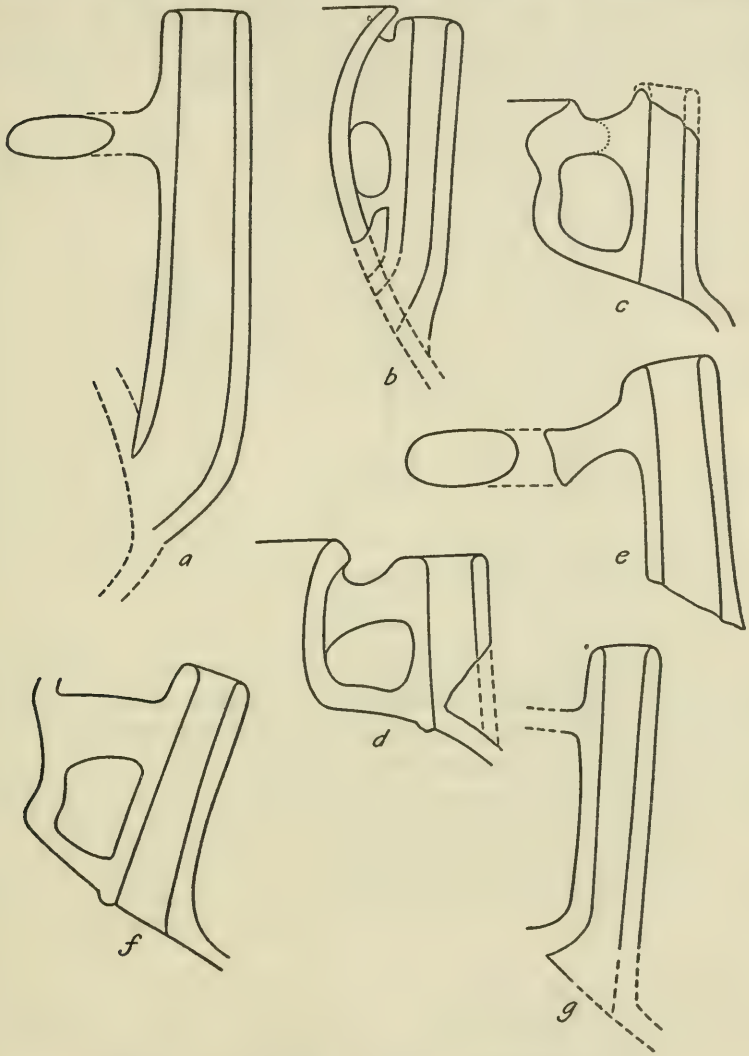

FIGURE 18.—Polychrome (Cream-white slip) vessel spouts.

of the ball and the slab types also occur. A very few hollow cylindrical legs, some with expanded bulbous upper portions, come from the site. Figure 17, *a* to *l*, and plate 10 show the range of form of these features. In this ware supports seem to have been used in threes invariably.

Miscellaneous forms.—A form type which can only be called by the overworked phrase "object of unknown use" occurs now and then in lots of Polychrome sherds. This is a flat strip of clay, usually about 2 inches wide, with its ends bent over at right angles. The length of the main surface is ordinarily 3 to 4 inches. Not a specimen in the collections has the bent-over ends in complete condition. They extended an inch or more, and in the middle had a circular hole (or semicircular notch?) usually three-quarters of an inch across. The objects had an all-over slip, usually Cream-white.

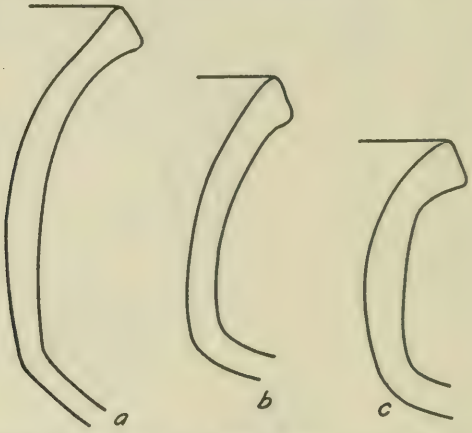

FIGURE 19.—Polychrome olla necks. *a* to *c*, Cream-white slip.

SLIPS

As has been brought out, Polychrome ware occurs in five slips: Cream-white, Buff, Gray, Orange, and Smoked Black. The first named, Cream-white, is numerically the predominant subtype. It is a very heavy layer of pigment, white with just a faint tinge of cream (13′ *f*, pale ochraceous-salmon; a small percent of sherds are lighter than 17′ *f*, light buff [17]). Misfired specimens are a dirty gray. The characteristic "ivory feel" of this slip almost enables one to sort it out of a pile of sherds by touch alone. This is probably the only variety of Polychrome ware in which the slip is of a different material from the paste.

Buff-slipped vessels seem never to have been particularly numerous as compared with Cream-white forms. The slip, which seems to have been made of the same clay as the paste varies in color from quite light to dark shades of buff (17″*d*, pinkish buff, to 15″*b*, pinkish cinnamon). Apparently the difference from the related Cream-white subtype in paste and slip color is due to a slightly different firing. The paste is the same in texture, lack of temper, and hardness, lacking only the

[17] Color determinations are based on Ridgway, 1912.

reddish tones to make it undistinguishable from the orange paste of the other ware.

Gray-slipped sherds are gray from core to wall. The typical slip shades range from a light warm gray to a dark steel gray (21‴*f*, pale olive-buff, to 21⁗*b*, light grayish olive, to 23⁗⁗*i*, dark olive-gray). Some vessels, especially the larger heavier ones, show muddy brownish areas due to unequal firing. It is not beyond the bounds of possibility that this Gray subtype is not a distinct one, but comprises instead overfired Cream-white vessels, in which slip as well as paste took on the gray color noted as occurring at the core of many Orange paste sherds. Since, in any event, we consider these two as related varieties of the same ware, this possibility does not matter greatly, for all the members of the group are lumped in the final counts. There are a few Gray-slipped sherds from the various trenches, and several complete bowls in the cache material from trench 23 of a light slate-gray shade, with darker gray firing clouds. I am not certain whether these should be counted as off-color Cream-white or off-color Gray forms. They even might have been classed as imported pieces, were it not for their typical shape, paste, texture, and hardness.

The Orange slip used on some Polychrome vessels is unmistakably a burnished wash of the orange clay used for the paste. Some examples show a brownish tinge, but the common shade is a bright orange (13′, zinc orange, to 13″, orange-cinnamon). It should be added that worn, dimmed sherds of this subtype are practically impossible to tell from Cream-white sherds whose slip has been eroded away.

Smoked Black vessels, in the characteristic shapes and of the paste of the Polychrome group form a very small percent of the ware. Their color is not quite black; they have a faint olive-brown tinge (from 21‴*f*, pale olive-buff, to 21⁗*b*, light grayish olive, to 23⁗⁗*i*, dark olive-gray) as though the orange paste color were showing through the smoked surfaces. In a few pieces the paste has been fired to a brownish gray, but even in these the polished surfaces have a brownish tone. Of all the forms of Polychrome this is the least likely to have had painted decoration.

The red pigment used in Polychrome designs was occasionally applied all-over—slip fashion—on the insides of bowls. This "slip type" is too infrequently found to merit a special category, especially since it usually occurs in conjunction with another slip on the outer surface.

DECORATION

Incising.—As befits a ware predominantly designed to be painted, few Polychrome vessels have incised designs. Probably the commonest decoration of this kind occurs in the heavier of the Gray bowls, with curved sides and direct rims, and those with heavy in-

turned rims. In many of these, two or three heavy lines were incised just below the rim before firing. I have seen but one example of the ware—a flaring-rim bowl from the cache in trench 23 (pl. 10, *j*) with representative incised designs (excepting, of course, the punched-circle and appliqué faces on olla neck, previously mentioned). These are conventionalized birds' heads on the flaring rim, very much in the spirit of the representative painted designs. Painted designs are not outlined by post-firing incising, as were many Cerro Montoso pieces (Strebel, 1885–1889, vol. 1, pl. 8, figs. 9, 12, 21; pl. 2, figs. 1, 2).

Painting.—The colors used for decorative painting were four in number: Red (3′*k*, madder brown, to 5′*k*, brick red, to 7′*k*, Hay's russet), orange (9*i*, Mars orange, to 11*i*, orange rufous, to 7″ *i*, vinaceous-russet), black, and white. Red and black seem to have been the most frequently used colors in Cream-white Polychrome (white was not applied as a design color in this subtype); red and orange were most frequently used on the Buff slip variety. (See frontispiece, pl. 1, for color range.) However, the colors, with the exception just made as to white, were used in all possible combinations: all together, any three, any two, or singly. It is worth a comment that blue, a color applied to a number of examples of a late type of figurine at Tres Zapotes, has not been observed on any vessel from the site.

The treatment of decorated areas is characteristically bold and simple. Lines tend to be broad and sure, and drawn in sweeping curves. Sometimes the treatment verges on the cursive (pl. 10, *e*, *h*). Both fine-line decoration and rigid angular lines are very uncommon. Perhaps because of the intrinsic strength of the lines, accentuation by bordering with another color is not a characteristic of the ware. Where used, red is the most common border color. Quite as typical as the boldness of line is the open character of designs. The largest color areas are those of the background (slip). In this regard Tres Zapotes Polychrome differs from such wares as Cerro Montoso, in which relatively small areas of the slip appear between large masses of design color (Strebel, 1885–1889, vol. 1, cf. pls. 7, 8, 9, 10).

Both representative and geometric patterns occur in the same bold treatment. The material on which this study is based suggests that of the two, geometric designs were the more common. This impression may be erroneous, owing to the scarcity of complete or restorable vessels retaining their painted decoration. Fragments of conventionalized representations on sherds might easily be mistaken for parts of geometric patterns. From recognizable pieces, however, it appears that the figures were highly conventionalized. Jaguars, birds, feathered serpents, and one fragment that seems to be part of a masked human figure are represented on various specimens (pls. 10, *a*, *b*, *c*, *e*, *h*; 11, *a*). Among the geometric patterns, curvilinear ele-

ments prevail. Sinuous curving lines, pairs of opposed single curves, S-shaped figures, rows or opposed pairs of U-shaped elements lying on their sides, single or concentric circles, and rows formed of short open curves joined end to end are among the more frequently recurring design units (pls. 10, *d*, *e*, *h;* 11, *a*, *b;* 15, *b*). Hachure, although common in the incised decoration of other Tres Zapotes wares, is quite rare in painted design. For filler, dots are much more common. They may be small, not quite regular dabs, or large disks. One vessel has what appears to be skeuomorphic glyphs as part of a geometric design (pl. 11, *b* (rim)).

In general, Tres Zapotes Polychrome decoration may be characterized by restrained use of color-masses, bold sweeping lines, and curvilinear design elements.

COARSE PASTE BROWN WARE

This ceramic group is named after its most important member. The ware is essentially a monochrome (instances of simple decoration in color occur very rarely). Slips vary in color, brown being the most common and having the most significant vertical distribution in the Tres Zapotes deposits. A small amount of Red-slipped and White-slipped sherds occur. Both are constant throughout the deposits, each representing from 1 to 3 percent of the total sherds, without significant distributional trends. There is also an extremely rare Red-and-White Bichrome. All these forms may be classed as a single ware on the basis of uniformity of shapes and paste type, despite differences of surface coloring. This treatment also has the merit of emphasizing the very strong relationship between the several varieties, and moreover of keeping the number of "wares" down to reasonable limits. Actually, as will appear in the stratigraphic analysis, inclusion or exclusion of the Red- and White-slipped variants makes no difference at all to the clean-cut trend of the Brown-slipped form. For clarity, however, in the present descriptive paragraphs, the main descriptions will apply specifically to the important Brown-slipped form, followed by summary accounts of the minor variants.

PASTE

The characteristic paste of this ware is orange-brown to reddish brown (9′*k*, Kaiser brown, to 13′*k*, russet, to 13″*k*, Verona brown, to 13‴, fawn color) in color, contains a good deal of sand tempering material, and is moderately hard. Probably a function of paste type, vessel walls tend to be relatively thicker than in the Polychrome ware. All these statements, of course, refer to the large body of material which forms the standard, or mean, and must be qualified to account for variant forms. Thus, paste color carries from a light

sandy brown to a dark shade. Some examples, less well fired, have a black or nearly black core. Most sherds, however, have the reddish brown tone described above. Some sherds have a very high sand content, and others, very little. Those with little tempering are flaky in texture, and rather soft. I have the impression that such sherds are more numerous in older than in later levels, although the heavily tempered variety are numerically predominant throughout the deposits.[18] Wall thickness, too, varies. A few very thin Brown ware vessels occur along with the heavier ones.

Red-slipped and White-slipped vessels, the two most important subtypes of the Coarse Paste Brown ware, exactly duplicate the paste of the major member of the group. Eroded sherds of the three Brown ware subtypes could not be told apart.

VESSEL SHAPES

Bowls.—Of the several bowl shapes in this ware, the most common is a simple silhouette form with flat base and flaring sides (pl. 17, *d*, *g*). The wall may be nearly straight in profile, but usually curves outward slightly. Rims vary through a series of intermediate forms from simple direct, to thickened, to wide flat everted (fig. 20, *a* to *k*). A few late period bowls of this form have three solid slab feet (fig. 20, *k;* pl. 17, *d*). A typical though not constant feature of the early everted rims is the wide pre-firing grooving, usually in the form of simple concentric rings about the vessel mouth, with which they are decorated (fig. 20, *g*, *h*).

A small proportion of curved-side open bowls occurs in the Brown ware. These are usually small vessels, approaching the hemispherical in shape, with simple direct rims. Apparently most of them had a slightly flattened area at the base.

Bowls with incurved sides are more numerous than the open-curved variety. Some rim sherds of vessels of this shape might be classed as fragments of small ollas were it not for the occurrence of a few restorable specimens, for the interior slip or wash often did not come up to the overhang of the vessel mouth. The more nearly complete examples, however, show that these containers were small, and quite wide-mouthed. One form has a tapered everted rim, ovoid body with a flat base (pl. 17, *a*; fig. 21, *a* to *d*). Another has a short vertical simple rim and subglobular body slightly flattened at the base (pl. 17, *c*; fig. 21, *e* to *j*). A few specimens have long gradually flared rims.

Another bowl form is, although never of high frequency, an im-

[18] The most variant paste is very light tan, almost white in color, gritty, and friable. The polished slip is harder than the paste, giving a lacquerlike effect. However, because the slip, and vessel shapes, where ascertainable, are identical to that of normal Brown ware, and because such sherds occur at all levels, always in extremely low numerical proportions (in no case anywhere near 1 percent of the Brown ware), it is assumed that this is an unimportant variant of the normal type of paste.

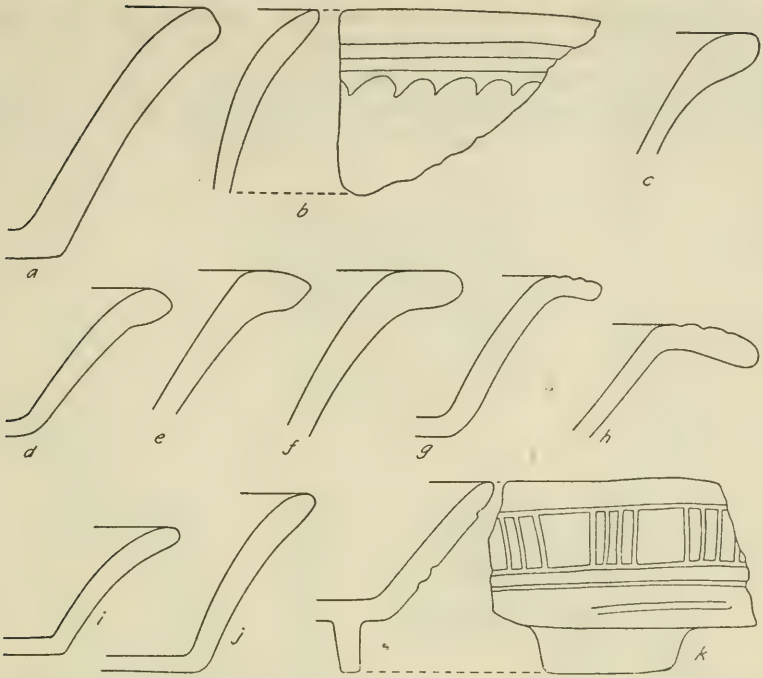

FIGURE 20.—Brown ware flaring-side bowls. *b*, Post-firing incising; *k*, Upper phase type heavy pre-firing incising. *i*, *j*, *k*, have unslipped bases.

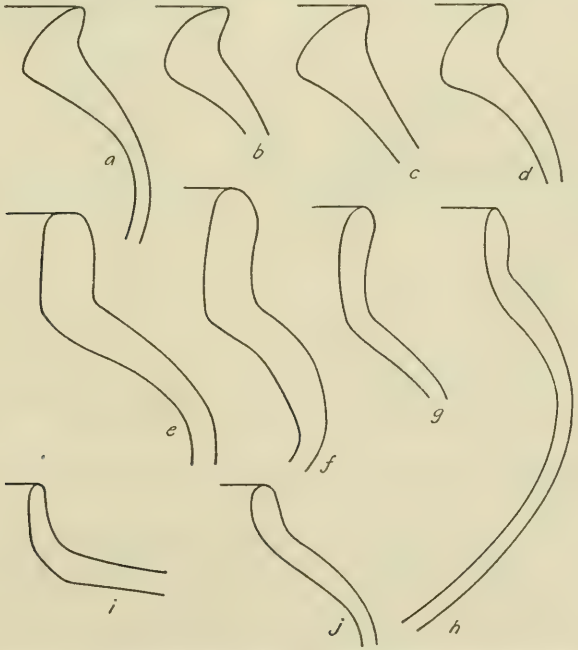

FIGURE 21.—Brown ware incurved-side bowls. *a* to *d*, Tapered everted rims; *e* to *j*, short vertical rims. *i* has a white slip.

portant diagnostic of the Brown ware, and especially the earlier phases. This is a composite silhouette bowl, with flat base from which the walls slant outward to an obtuse-angled shoulder, then rise until they turn sharply outward into the flaring rim (fig. 22, *a* to *h*). The interior surface of the vessel fills in the angles of the profile with

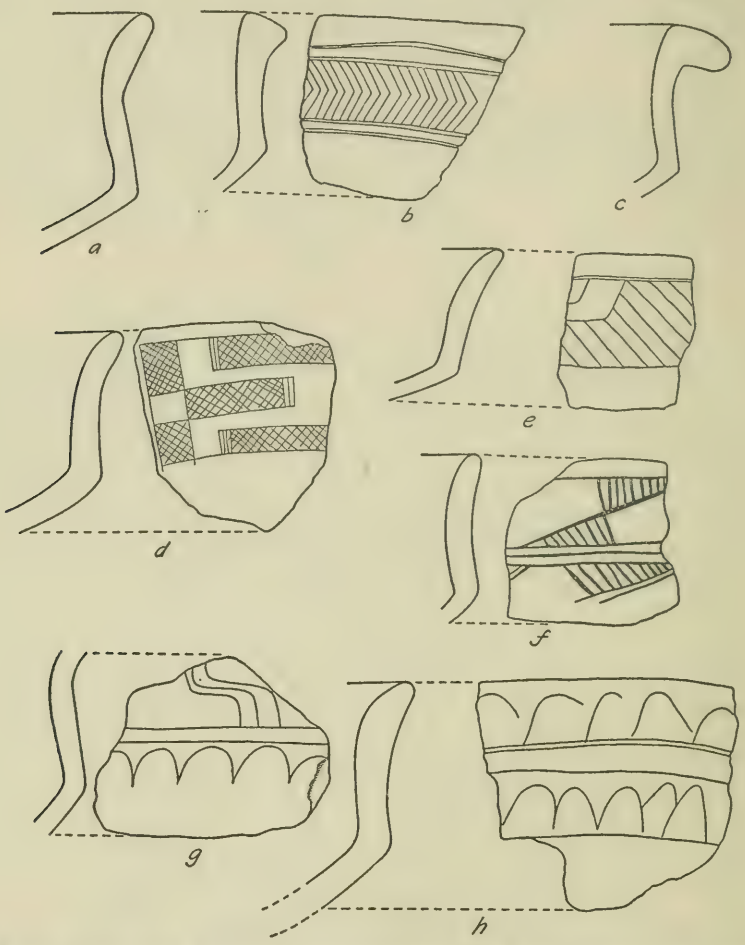

FIGURE 22.—Brown ware composite silhouette bowls. All incised designs shown except *e* are post-firing. *g*, *h*, Red-and-White Bichrome (white exteriors, red interiors).

sweeping curves. This same shape, or one much like it, is also found in Black ware.

Dishes.—A number of small apparently shallow vessels represented in the sherd collections have been classed as dishes. A very few are simple forms; most are composite in silhouette. Their shape range includes variations of the composite silhouette bowl described above (fig. 23, *a* to *e*, *j*), and forms with wide flat bottoms, in which the wall

slants inward from the sharp angle formed with the base and then is recurved outward (fig. 23, *f* to *h*). In many of the dishes, the shoulder or side angle has been accentuated, sometimes to a molding. Often this accentuated angle or molding has been notched at intervals, or in some cases lobed. This decorative feature recurs on other Brown ware forms.

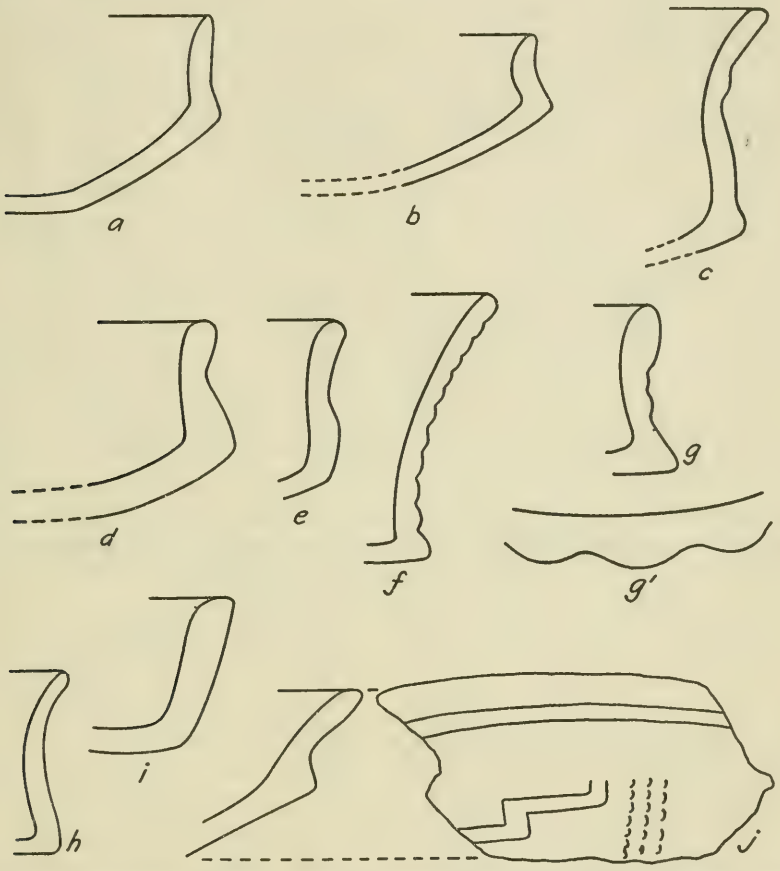

FIGURE 23.—Brown ware dishes. *a* to *e*, *j*, Composite silhouette; *f* to *i*, simple silhouette; *g'* is lobed basal flange of *g*.; *j*, Red-and-White Bichrome (red exterior, white interior) with post-firing incising on the exterior.

Spouted vessels.—One restorable Brown ware spouted vessel was recovered in 1940. It has a long ollalike neck, a squat body with angled sides, and a flat base (pl. 17, *e*). Spouts are not uncommon. In only rare instances, and these are from Middle and Upper deposits, are spouts of the supported variety found in Polychrome ware. All the rest are stubby, unsupported, and slant outward from the vessel wall more than do the supported variety (fig. 24, *a* to *d*).

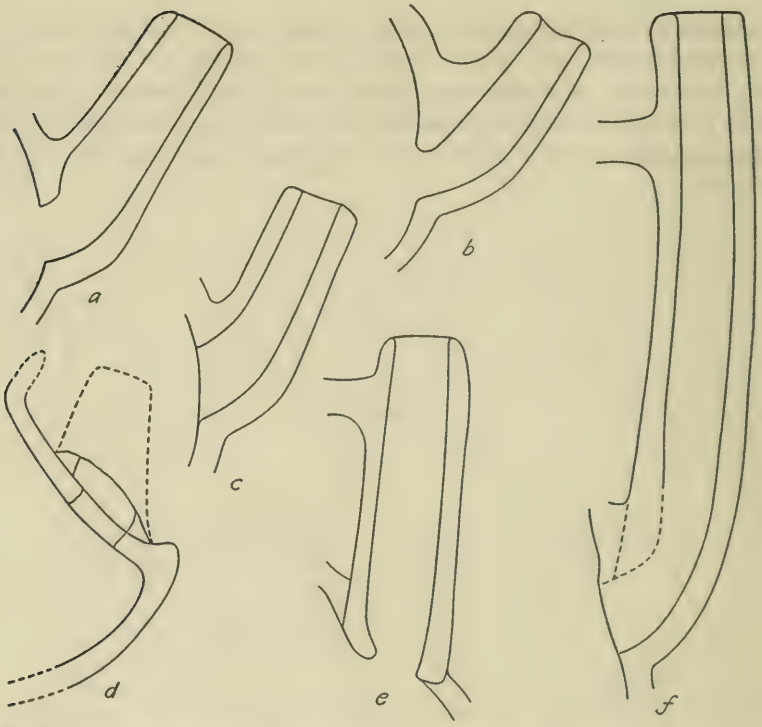

FIGURE 24.—Brown ware spouts. *a* to *d*, Unsupported type; *e*, *f*, Upper phase supported type. d, Red-and-White Bichrome (red upper half, white lower); *e*, White-slipped.

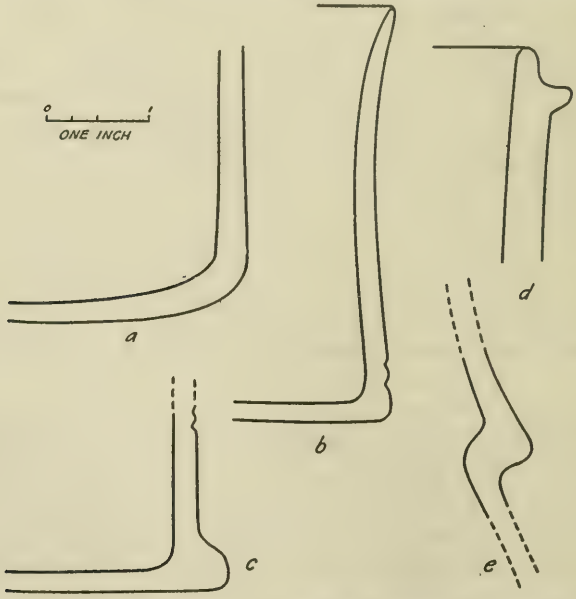

FIGURE 25.—Brown ware jars. *a*, *c*, Jar base fragments; *c* has a Red slip.

Jars.—Jars are less common in Brown than in Black ware, but nearly the same range of forms occurs. If there is a difference, it seems to be that Brown ware jars tend to be lower walled. Some, indeed, might be vertical-side bowls rather than jars. In simple silhouette forms, both vertical-side and slightly concave-side jars are found. Base angles vary from sharp angles to rounded (fig. 25, *a*, *b*). Some sherds, apparently from vertical-walled jars, have a flange or molding at the base and/or just below the rim (fig. 25, *c*, *d*). The composite silhouette jars have the form of two or three wide-bottomed dishes or bowls with leaned-in walls set on top of each other (fig. 25, *e*). This is a very characteristic Black ware form, but a number of Brown ware fragments have been recovered which seem to be from vessels in this form.

Large jars or urns.—There are two very large Brown ware vessel types that must have been meant to be used specifically for food storage, or for burials, for they are much too large to have been carried about. In at least one instance, vessels of these types contained adult human bones, or rather, one contained the bones and the fragments of the other. The first type is a thick-rimmed, wide-mouthed jar, slightly constricted above the rim-body joint, with rounded sides tapering to a round or very slightly flattened base (fig. 26, *a* to *d;* pl. 8, fig. 2). The rim, thickened on the inner side to a triangular section, is often as much as 2 inches through (fig. 26, *a*). The vessel walls are relatively thin compared to the rim. Usually the walls are raked on the exterior, like the Unslipped Ollas. One of these thick-rimmed jars measured 23½ inches across the mouth, 83 inches maximum circumference, and 19 inches deep. The rim is 1⅝ inches thick, the walls 7/16 of an inch.

The other type of large jar is composite in silhouette. The most nearly complete one recovered has a very elaborate profile (pl. 16, *h*). The rim, grooved about its outer circumference, is inclined inward from a pronounced angle (notched after firing). Below this angle, the wall, or neck, is slightly concave, then bulges sharply to form a rounded side tapering toward the base. A row of appliqué bosses adorns the rounded portion of the side. The lower part of the body is raked, olla-fashion. The interior is slipped about halfway down from the rim. As restored, the vessel stands 18 inches high, with a mouth diameter of 23 inches. Similar rim and wall fragments were found in other trenches, but no other restorable examples of this type were found.

Ollas.—Brown ware ollas are somewhat more varied in form than Polychrome ones. Differences occur both in body form and form of neck. Some olla bodies seem to have been rounded, nearly globular in section; others extended with very little curvature from the

neck out to a high shoulder, then turned sharply downward (fig. 27, *b*). Both flattened and rounded olla bases occur. Many exteriors are raked on their lower portions. Necks range through a complete series from absent (fig. 28, *a*, *b*) to tall (fig. 28, *c*). In nearly all cases

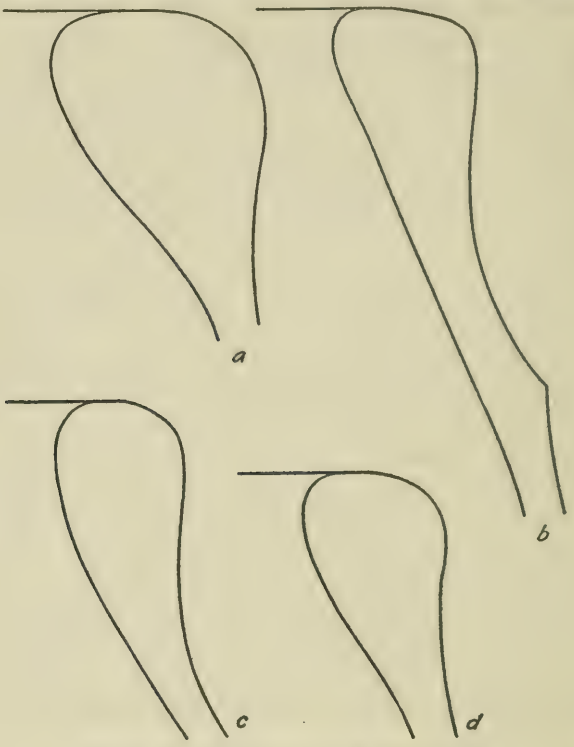

FIGURE 26—Brown ware thick-rimmed urns.

where necks occur, they turn a sharp angle from the vessel body and flare slightly. Plain, grooved, and ridged necks, some of the last quite complex in outline, are found (fig. 28, *c* to *m*). Olla necks with a face are common. Eyes, mouth, and ears are indicated by two or three solid punctations, in precisely the technique of early Tres Zapo-

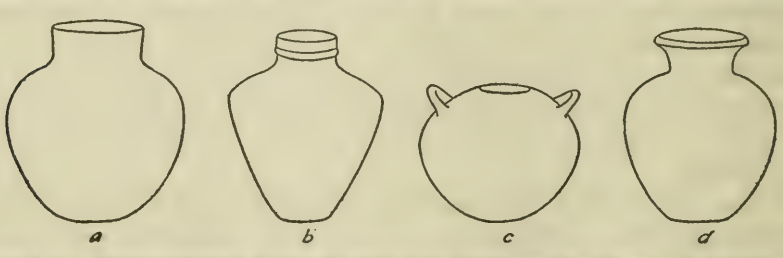

FIGURE 27.—Reconstructions of Brown ware and Unslipped Olla forms. *a*, Round-based type; *b*, angled-side flat-based type; *c*, neckless with slanting triangular lugs; *d*, flaring neck, rolled-rim type. *a* and *b* might have any sort of neck; *c*, *d*, Upper phase types.

tes figurines. An appliqué dab of clay serves for a nose, or perhaps beak—for many of these faces have a birdlike appearance (pls. 17, *j*; 18, *a*, *d*).

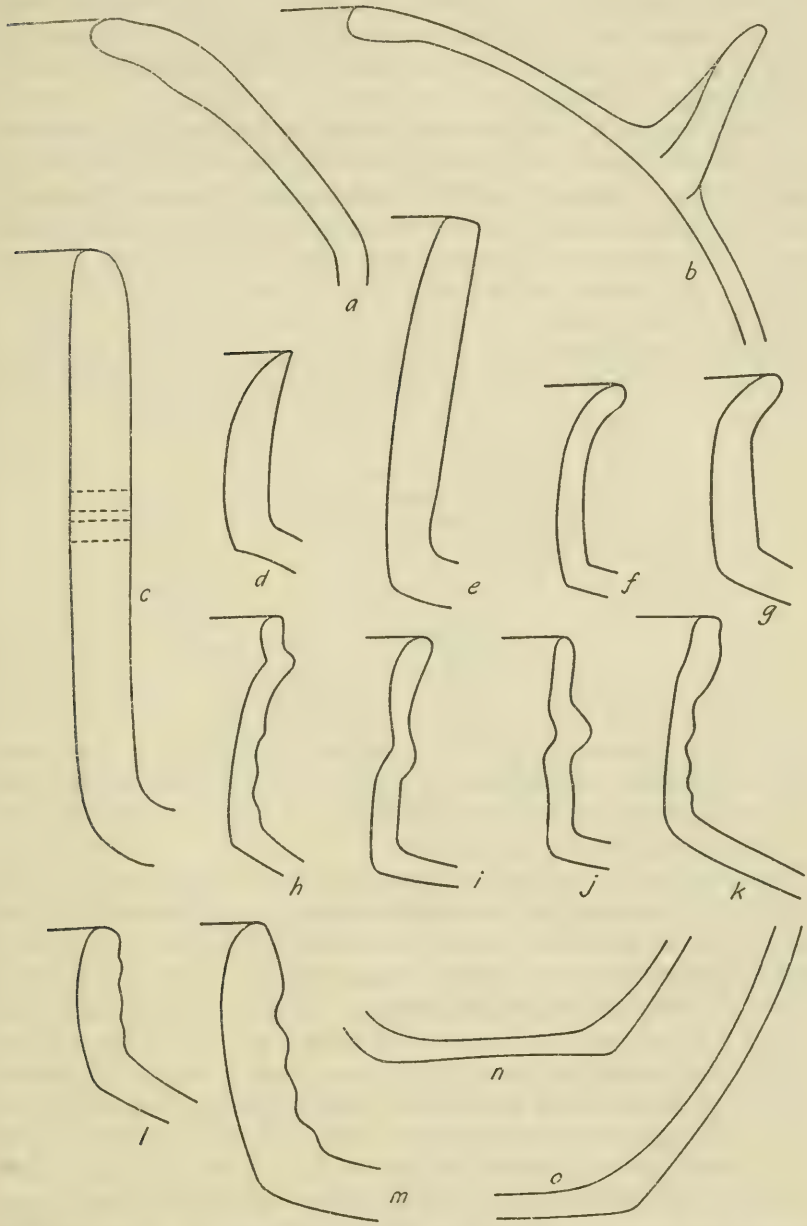

FIGURE 28.—Brown ware olla forms. *a*, *b*, Neckless; *c* to *g*, simple necks; *h* to *m*, complex necks. *b* shows a slanting triangular lug; *n*, *o*, flat bases; *c* has two drilled "mending holes."

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Miniature vessels.—Miniature vessels in Brown ware are very consistently tiny bowls or dishes, just as toy ollas seem to have been the chief Polychrome miniature form. The Brown ware examples are for the most part composite in silhouette, with rounded bases, low side angles, and returned rims (fig. 29, *b* to *d*). Whether they were really toys, paint dishes, or meant as offerings is, of course, impossible to determine.

A form associated with burials in a number of instances (especially in trench 10) is a small spouted vessel. Some of these are almost large enough to have served some utilitarian purpose. Ordinarily they have unsupported spouts, like the typical Brown ware spouted form. Many have face designs, consisting of incised and modeled features, in a number of specimens painted over with asphaltum, on the neck (pl. 19, *a* to *d*).

Effigy pots.—Brown ware effigy pots are not common, but a few were made. One fragmentary example from trench 1 represented

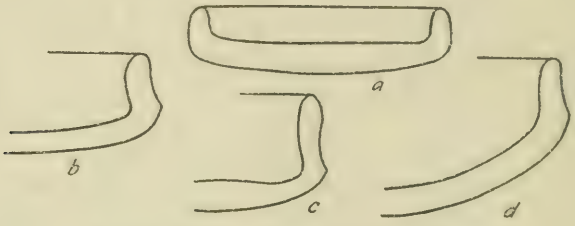

FIGURE 29.—Brown ware miniature dishes.

a head (pl. 18, *c*). The vessel is a small jar with in-leaned sides and strongly everted rim. The face was indicated by concentric rings of grooves, and apparently, if the type of ear can be taken to indicate the treatment of the rest, by punctuate features the same in technique as faces on olla necks.

Handles, feet, legs.—Handles do not occur in Tres Zapotes Brown ware, with two possible exceptions. One is a fragment of a loop handle from trench 19 made of three strands of clay twisted together after the fashion of a rope. The other, from trench 1, is a well-made fragment, with a heavy U-shaped cross section, and a longitudinal curve. This object might not have been a handle, of course, but it is difficult to suggest what else it might have been. Modeled tabs, apparently from flaring bowls with everted rims, are known in this ware, although they are not common.

Feet and legs are not common in the Brown ware of any period. The occurrence of a few solid slab feet in late Brown ware bowls has already been mentioned (pl. 17, *d*), and one hollow cylindrical leg has been recovered. Very rarely, hollow legs of the cascabel type, and a few of conical and truncate conical form occur, but never

so commonly as in Polychrome ware (fig. 30, *b* to *f*). Small solid conoidal feet are seen occasionally (on round-base ollas?). Generally speaking, Brown ware legs are less common, but more varied in form than Polychrome ones.

Heavy annular bases are represented by a number of examples from early Middle levels. They are not large (the largest in the collections is but 4¼ inches across with ⅜ inch walls) but both foot and vessel side are quite heavy (fig. 30, *a*). No complete vessels with this type of support have been recovered. Probably the bases were for some sort of flaring-side bowls. One low annular base, little more than a ring, was found on sherd of a small bowl or dish.

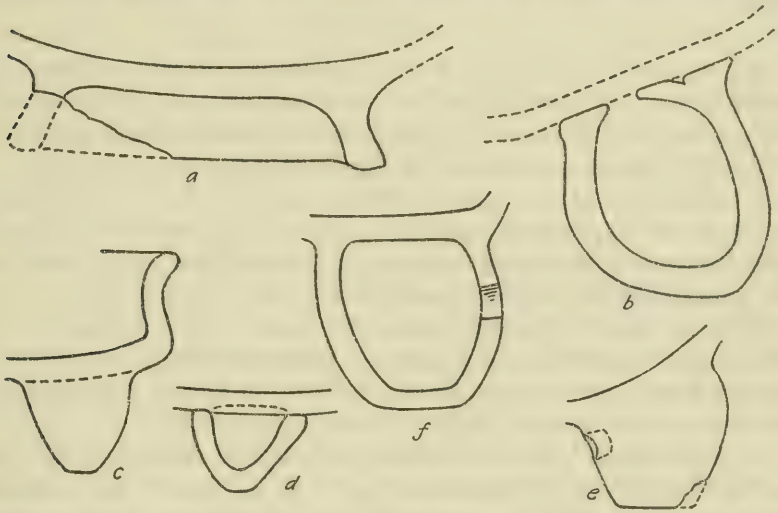

FIGURE 30.—Brown ware supports. *a*, Heavy annular base; *b* to *f*, various types of feet and legs. *c* is solid; *c* to *f* are White-slipped, but the same types occur among Brown-slipped fragments.

Inspection makes clear that the shape ranges of the Red-slipped and White-slipped subtypes parallel that of the Brown-slipped wares. That all the foregoing forms are not represented by these subtypes is probably owing to the low numerical representation of Red-slipped and White-slipped vessels in the collections. One would scarcely expect a complete representation of shape types in ceramic groups neither of which amounts to more than 2 or 3 percent of the total sherds. It is significant that in neither subtype has a vessel form been found that cannot be duplicated from the Brown-slipped specimens. A brief inventory of forms will show the similarities:

Red-slipped subtype.—Bowls: Flat base, flaring sides (wide everted rims rare); curved sides, open, simple direct rim; incurved side, short vertical simple rim; slightly everted tapered rim. Spouted vessel: Unsupported spouts. Jars (?): Low concave sides; vertical sides,

flanged rim. Ollas: Neckless, short, and long plain necks; necks with punctate face; "raked" body sherds.

White-slipped subtype.—Bowls: Flat base, flaring sides; curved sides, open, simple direct rim; incurved sides, short vertical rim; composite silhouette. Dishes: Composite silhouette. Spouted vessel: Unsupported spout. Ollas: Neckless to long plain necks; long ridged necks. Hollow mammiform legs.

Red-and-White Bichrome vessels are very rare. They are to be reckoned cultural sports, noteworthy only for the bare fact of their occurrence. Among the few forms represented are composite silhouette bowls (fig. 22, *g*, *h*) and a composite silhouette spouted vessel (fig. 4, *d*).

SLIPS

The brown slips used on this ware seem to be of the same clay as the paste. They were fired to a series of shades: From a bright orange brown (11′, apricot orange, to 9′*i*, ferruginous), to reddish brown (7′*i*, vinaceous-rufous), to dark chocolate 9*k*, burnt sienna, to 11*m*, auburn, to 11′*m*, chestnut brown), and originally were highly polished. Well-preserved specimens have a glossy finish. Prior to their exposure to the erosive effects of the soil the vessels must have had a very pleasing appearance (pl. 1).

The slip was ordinarily applied all over vessels (except olla interiors and the hard-to-reach areas in inturned-side bowls), except in the late horizon, when the exterior bottoms of flaring side bowls and sometimes the sides were neither slipped nor polished.

The red slip (3″, deep corinthian red) is different from that used for the red paint in Polychrome ware. It appears to be a specular hematite. The ease with which it comes off some sherds suggests that it was not fired on, or at best only lightly fired. In some instances, however, it is much more durable.

The white slip is properly a cream white (just lighter than 19″*f*, cartridge buff). It appears to be identical to the slip of the Cream-white Polychrome in color, in the thickness with which it is applied, and in finish. That the Brown ware subtype must be distinguished from the Polychrome group despite this identity of slip is indicated by the different vessel shape and paste pattern, and confirmed by the dissimilarity of the trends in their vertical distributions.

The few examples of the Red-and-White-slipped vessels are true Bichrome; that is, the colors are not superimposed, but occupy different parts of the vessel. For example, a bowl may have a red interior and white exterior, or, in the case of the spouted vessel, the upper portion is red and the lower, white. The general effect these specimens give is that of experimentation in use of color for decorative purposes. The red and white slips are the same as those just described for the monochrome forms.

DECORATION

Incising.—Coarse Paste Brown ware is essentially a monochrome ware, despite a few isolated pieces with lines or daubs of red or white paint, to be described below. The esthetic emphasis was on form and contour rather than on color contrasts. Occasionally, patterns were incised on the vessels. Such decoration was most often done while the clay was still soft, although a few post-firing incised designs occur. The patterns are invariably simple geometric ones: Parallel (or concentric) lines, stepped figures, opposed triangles, circles, rows of joined curves bordering straight lines, etc. (fig. 20, *b*; 22, *b* to *h*; 23, *j*). Angular figures predominate over curved ones. The chief decorative fields are the wide rims of flaring bowls, and bowl and jar exteriors. Essentially the incising is of the same type as that found on Black ware, but is rather less common.

What has just been said of Brown ware in general applies equally well to the Red and the White subtypes, with the minor difference that post-firing incising has a slightly higher frequency in the Red-slipped form.

Painting.—A very few vessels of this ware were decorated with a contrasting color. The designs in no way resemble those of Polychrome ware, for they are extremely simple, consisting merely of a few horizontal lines drawn around the interior of a bowl, or about the rim, in red or in white paint (never both). One example, a flaring-side bowl from trench 19 with a bright Orange-brown slip, has irregular concentric circles on the floor of the bowl, vertical lines on the wall interior, and a band about the rim, done in a darker brown paint. The collections include also several White-slipped rim sherds with borders in red, and one small composite silhouette dish which has a solid coat of red paint over a slip, or more likely a wash, of white paint.

Miscellaneous decorative features.—Several other types of pottery decoration have already been described: The notching of vessel wall angles and moldings, the lobed moldings, the punch-marked faces on olla necks. There are also a few examples of lobes and shallow impressions in the edges of wide everted bowl rims. Bosses of two kinds occur, chiefly on ollas. Some are low rounded lumps of appliqué. More often, the boss is punched out from the inside.

BLACK WARE

An account of Tres Zapotes Black wares must be prefaced by a résumé of the somewhat peculiar technique by which they seem to have been made. The paste is ordinarily black through and through under the black surfaces. In restricted areas, usually bowl rims, however, it fired a very light gray, and in these areas the slip or wash is nearly white (in a small percentage of cases paste and wash took on brownish shades). That this color variation is due to firing conditions

is indicated by the fact that a few otherwise all-black vessels are mottled with irregularly fired cloudlike patches of grayish white (pl. 21, *g* to *j*). In some badly fired pieces, traces of a thin white wash may be seen clearly against the misfired dull gray paste. Presumably, therefore, Black ware vessels were shaped and given a wash of a clay that could be fired gray to white. By means of some specialized firing method (or timing?) all or part of the vessel was turned black. This must have been a controlled technique, not a matter of accident, for the white areas when present are in the great majority of cases confined to a certain portion of the vessel. The significance of this matter of manufacture is that it establishes a ceramic group that is unquestionably an entity, culturally speaking, being technologically distinct from the other types of pottery at the site. Stirling found sherds of this ware at La Venta in northern Tabasco.

PASTE

Black ware paste varies somewhat in fineness and amount of temper. Some sherds appear to be of a clay nearly as finely divided as that of Polychrome ware, with minute specks of white tempering material, although as a rule the paste tends to be of medium coarseness, containing a good deal of white sand. The usual color of the paste is black. Dark-brown tones occur occasionally, as do grayish ones. A fair proportion of vessels, particularly flaring-side and open curved-side bowls, have light-gray to nearly white rims. In these cases the gray portion of the paste may be very superficial, or it may begin at the surface on the body of the vessel and increase in thickness so that the rim is gray clear through. Usually the gray area extends farther down the outside than the inside of the vessel. The line between gray (or white) and black areas on the surface usually runs horizontally, but irregularly, with blurred edges like those of a firing cloud (pls. 19, *h*; 21, *d* to *j*). Some bowls are gray over the entire outer surface. What has been said of the gray holds equally true of Brown-rimmed sherds. Infrequently, a Black ware vessel is found which has been misfired to none of the foregoing colors, but to a not particularly attractive olive brown.

VESSEL SHAPES

The description of Black ware vessel forms is simplified by the fact that most of them closely resemble those found in Brown ware. Minor variations exist, but the greatest differences are quantitative rather than qualitative, as will appear in the stratigraphic analyses. For example, there are fewer Black ware ollas than in the Brown ware, relatively more composite silhouette bowls, dishes, and jars, more incised decoration. It is probably significant that these two wares, whose history runs back through the entire period of occupation of the site to the earliest discovered levels, should manifest such a close relationship.

Bowls.—The three common types of Black ware bowls are the flat base, flaring rim form (fig. 21, *a* to *c*), the open curved-side form (fig. 31, *d*, *e*), and those with composite silhouette (fig. 32, *a* to *f*). The flaring bowls have simple direct or slightly flared rims for the most part; wide flat everted rims are much rarer than in Brown ware. The elaborate variety of the flat everted rim, however, with modeled tabs

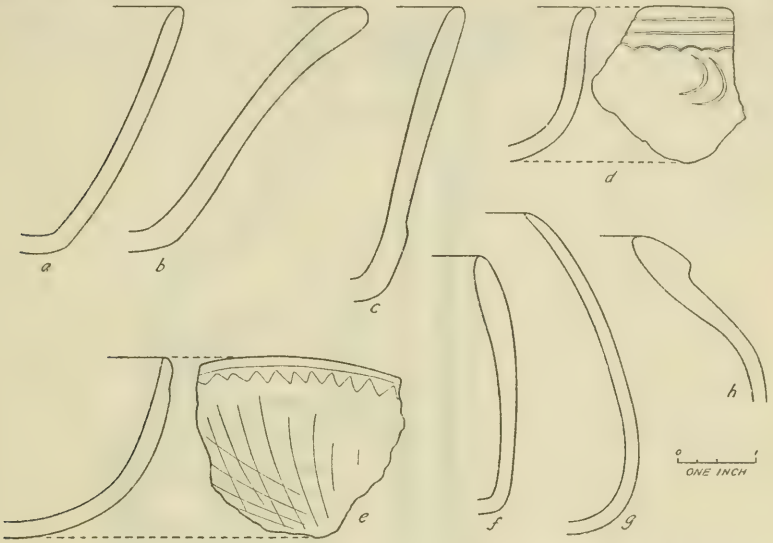

FIGURE 31.—Simple silhouette Black ware bowls. *a* to *c*, Flaring side; *d*, *e*, open curved side; *f* to *h*, incurved side.

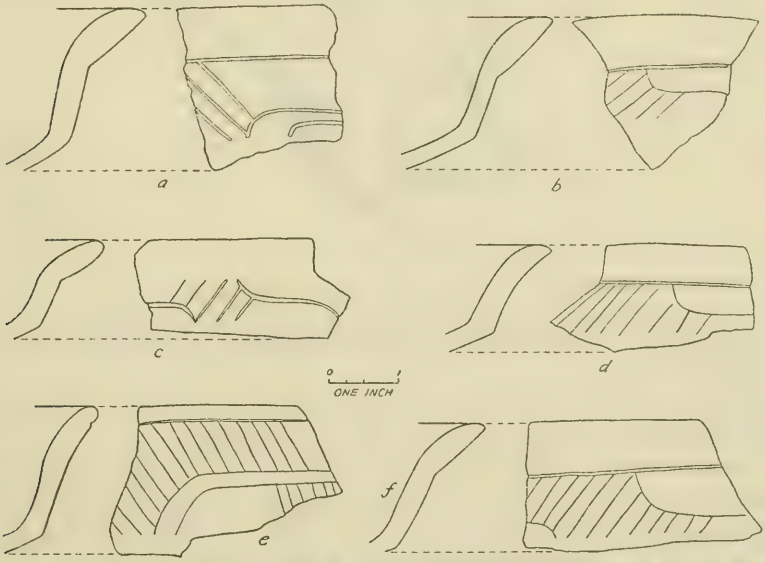

FIGURE 32.—Composite silhouette Black ware bowls, showing pre-firing incised designs characteristically associated with this vessel shape.

and often a lobed or scalloped rim edge, is more common in Black ware (fig. 33). Open curved-side bowls usually have simple direct rims and wide flat bases. There are forms with incurved sides and simple, externally thickened, or rarely, returned rims, but these are relatively few in number (fig. 31, *f* to *h*). Composite silhouette bowls

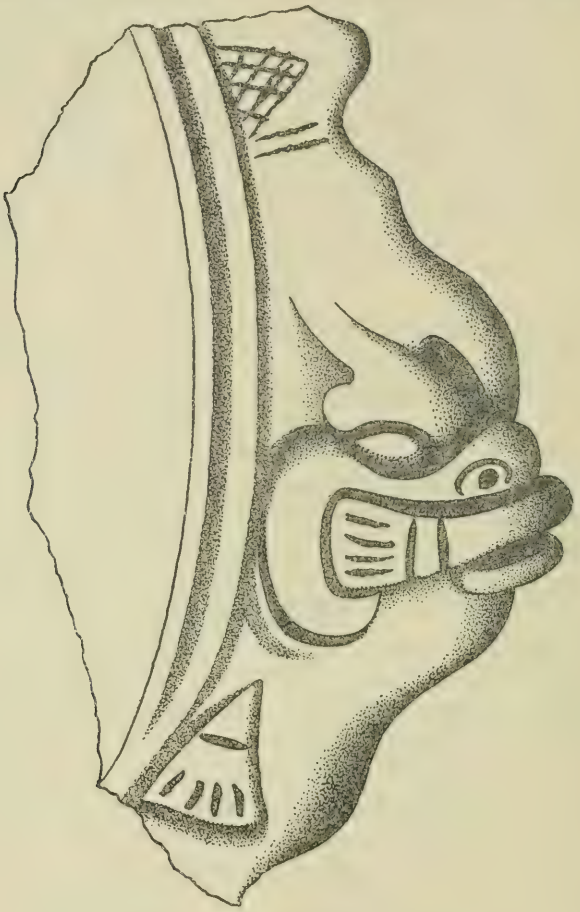

FIGURE 33.—Modeled tab on everted rim Black ware bowl.

are of nearly the same form as the Brown ware ones, and of relatively high frequency.

Dishes.—Dishes are chiefly composite in silhouette, with about the same range of variation as in Brown ware (fig. 34).

Spouted vessels.—Distinctly rarer than in Brown ware, a few vessel spouts occur. Only one of those recovered in 1940 was of the supported variety; the rest were simple. No complete spouted vessels of Black ware have been found.

Jars.—Jars form a very important class of Black ware vessels. Concave and straight to slightly flaring side (fig. 35, *a* to *e*; pl. 20, *b*); and composite silhouette shapes are all represented (fig. 36, *a* to *c*; pl. 20, *c*, *d*). Some concave-sided jars are wider at the base than at the mouth. Sherds with flanges just below the rim (fig. 35, *c*), and others with a thickened or collared base (fig. 35, *b*), are probably from straight-sided jars.

Ollas.—In this ware, as already remarked, there are proportionately few ollas. The range of types is about the same as in Brown ware.

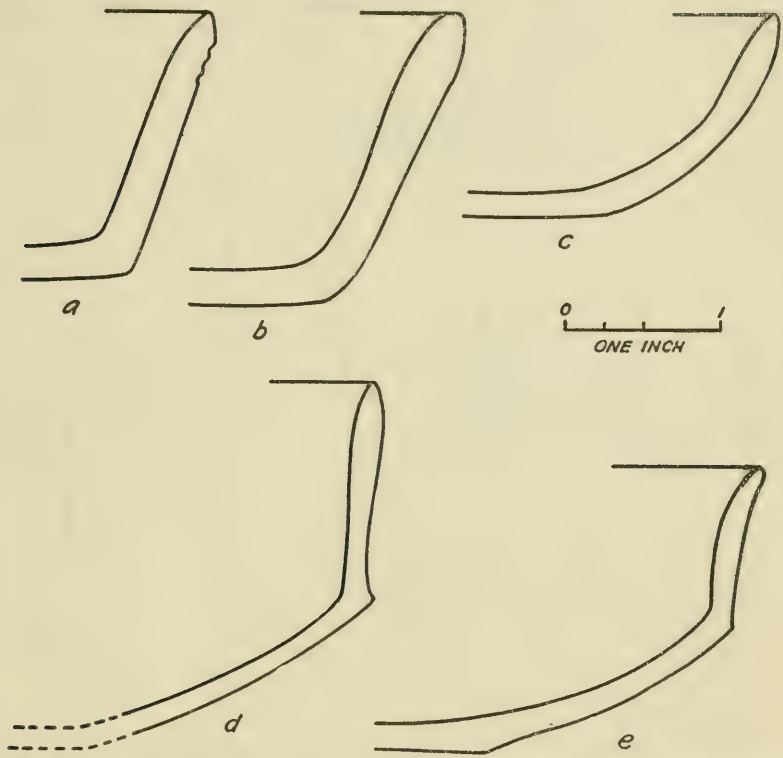

FIGURE 34.—Black ware dishes. *a* to *c*, Simple silhouette forms; *d*, *e*, composite silhouette forms.

There are neckless, short, and long necked forms, both plain and ridged (fig. 37, *a* to *d*). A few long slender necks may be from bottlelike forms. Little can be said as to the body form of Black ware ollas. Some high-shouldered wall sherds have been found, but probably most olla bodies had rounded sides. No necks decorated with faces have been found.

Miscellaneous types.—Effigy jars occur in Black ware. The best example in the 1940 collections is a small wide-based fragment from trench 26, the wall of which is modeled and incised to form a low

relief face (pl. 35, *t*). A larger but less complete fragment comes from trench 10 (pl. 42, *s*).

Handles, feet, and legs.—Handles do not occur in this ware, unless a curving fragment, U-shaped in cross section (like the Brown ware "handle" described on p. 56, but thinner) could be one. This object comes from the same trench and level as the similar Brown ware object. Only one example of a leg—a slightly elongated cascabel form from trench 26—was recovered in this ware. A few low annular basal rings, probably from bowls, occur.

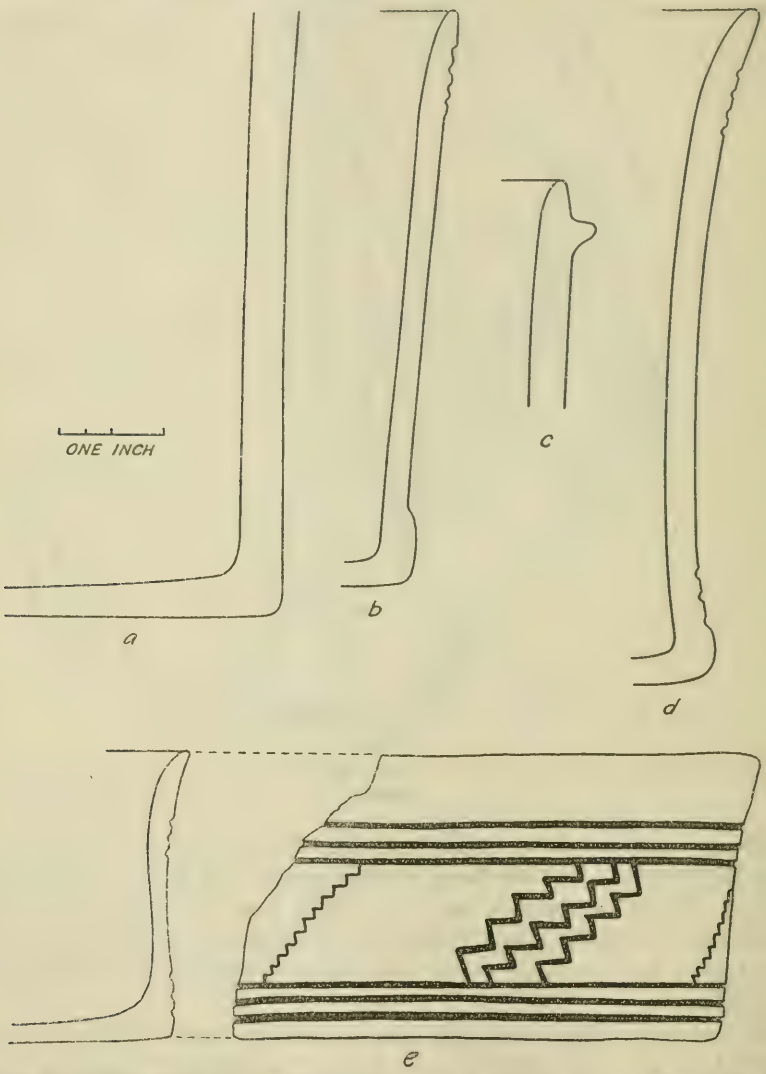

FIGURE 35.—Simple silhouette Black ware jars. *a* to *c*, Vertical side; *c*, flanged rim; *d*, *e*, concave side. *b*, *d*, and *e* have pre-firing incising; that of *d* is red paint filled.

White-rimmed, Brown-rimmed, and Mottled Black shapes.—These subtypes, if they may be so distinguished, are confined principally to bowls of the flaring side and open curved-side varieties. These forms are the same as in all-black vessels (fig. 38, *a* to *k*). A very characteristic flaring bowl shape has a slightly everted rim, with deep horizontal grooving on the flat surface of the rim (fig. 38, *f*, *g*).

Many composite silhouette Black ware bowls are Mottled Black, having white areas, but these, because the white occurs in irregular patches instead of being restricted to the rim, have been considered misfired examples, and included in the counts with the all-black sherds

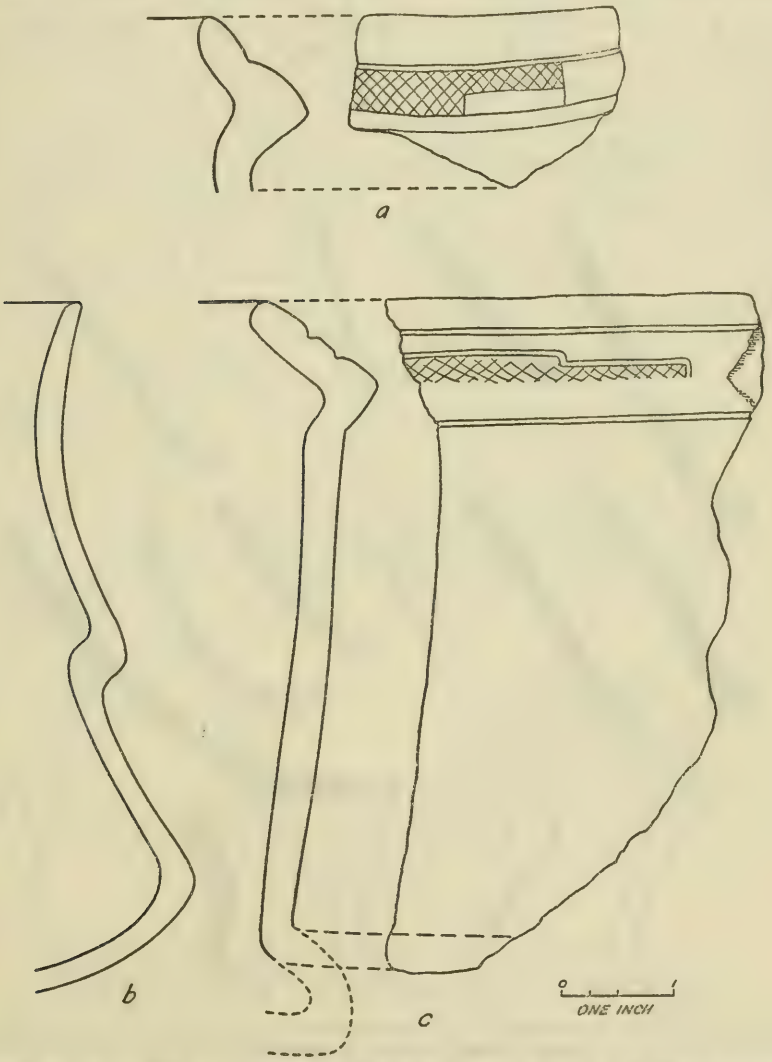

FIGURE 36.—Composite silhouette Black ware jars. *a* has a post-firing incised design; *b* and *c* have pre-firing incised, red paint filled designs.

(fig. 38, *n* to *p*). Apparently either something about the shape of these bowls made the firing technique harder to control than in simple silhouette forms, or a cultural preference definitely restricted the technique to certain forms.

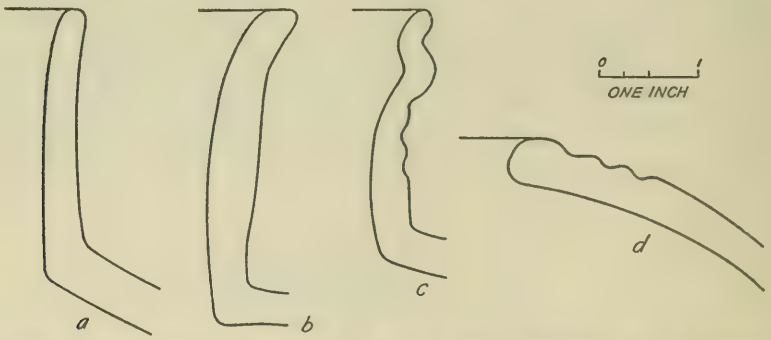

FIGURE 37.—Black ware olla necks. *a*, *b*, Simple necks; *c*, complex neck; *d*, neckless.

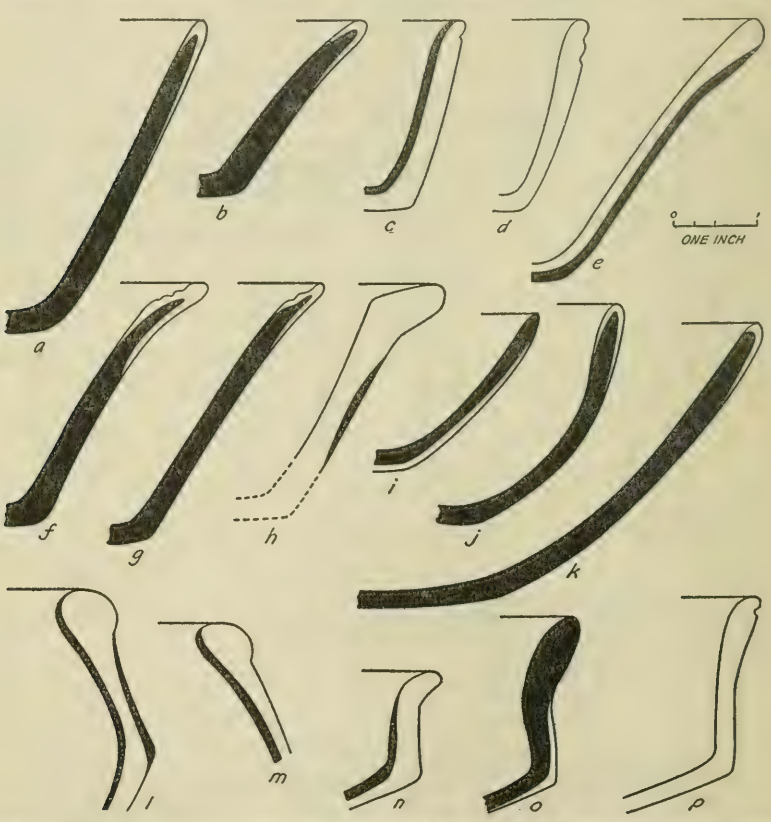

FIGURE 38.—White-rimmed and Mottled Black ware bowls. Black and white areas indicate relative amounts of black-fired and white-fired paste in examples; *a* to *h*, flaring-side bowls; *i* to *k*, open curved-side bowls; *l*, *m*, incurved side; *n* to *p*, composite silhouette bowls.

SLIPS

The significant characteristics of the slip used on the Black ware have already been described. It is a mixture of the same material as the paste, which fires black, white, or brown, depending presumably on firing conditions. This slip takes a high polish, which, however, was not applied in every case. Flaring-side bowl exteriors were often left dull, with work marks made in the preliminary smoothing of the vessel wall still showing.

DECORATION

Incising.—The most common form of decoration applied to Black ware vessels was incising, done, as a rule, while the unfired clay was still soft. Post-firing incising occurs, though, and sometimes in the form of broad scraped lines. Principal design areas are the exterior walls of jars and composite silhouette dishes, the accentuated angles of composite silhouette jars, and everted rims of flaring-side bowls. Designs are exclusively geometric. Both curvilinear and angular motifs occur. Angular elements such as rows of parallel lines, rectangles, triangles, and stepped figures, predominate. Occasionally, a row of short curves joined end to end is used as a border for a series of straight lines. A motif particularly common on composite silhouette bowls consists of horizontal S-shaped figures, often angular rather than rounded, between rows of diagonal lines (fig. 32, *a* to *f*). Cross-hatching is a common device for filling space. A series of typical designs are shown in figures 31, *d*, *e;* 32, *a* to *f;* 33; 35, *b*, *d*, *e;* 36, *b*, *c;* 39; 40, *a* to *c*.

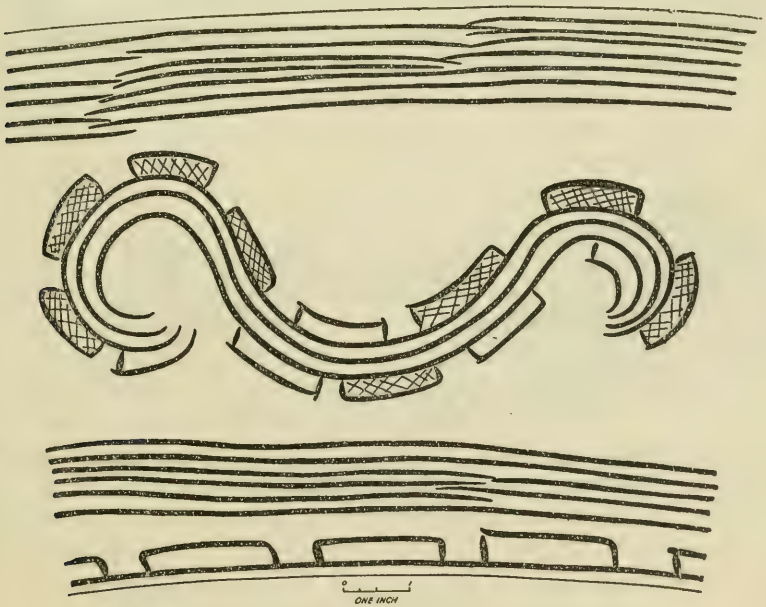

FIGURE 39.—Pre-firing incised design from Black ware jar.

FIGURE 40.—Black ware vessels with post-firing incised, red paint filled designs. The vessels are early forms with late, carelessly executed designs.

By way of bringing out the designs more clearly, red paint was often rubbed into the incisions. This appears to have been done after firing, for the thickly caked paint can be washed out of the grooves, and is often lost. In their original condition, the well-finished glossy black vessels with their red-filled incised patterns must have been very attractive.

Painting.—Except for the filler in incised designs, paint was not used on Black ware. A few sherds have smudges of unfired red paint, but this probably is due to contact with red-slipped sherds in the deposit.

INCENSARIO WARE

PASTE

Incensario ware is made of a medium coarse reddish-brown paste (11″, vinaceous tawny, to 13″, orange cinnamon) with some sand tempering material. It resembles certain varieties of Brown ware paste, except that the tempering material is ordinarily somewhat finer. Surface treatment and vessel shape serve, however, to distinguish Incensario from Brown ware sherds. An occasional incensario fragment shows up, particularly from the upper horizons, that is made of the same paste as Polychrome ware. None of these have any traces of slip or pigment, however. There are also a few incensario sherds of a very heavy gritty paste, much coarser than the usual kind.

VESSEL SHAPES

There appear to have been two principal forms of incensarios in use at Tres Zapotes. The more common is an open bowl form, with curving sides, and three loop handles, set low on the sides in such a way that they could serve as legs (fig. 41, *a*, *b*). Usually the rim flares slightly, then turns back up, forming a slight shelf on the inside. Rather elaborate rim forms with flanges are very characteristic (fig. 41, *f*, *g*). Either rim or flange may be decorated by notches, cut in while the clay was soft. There are, of course, simpler varieties of rims as well. It is possible that some of these vessels may have been incensario lids; the flattened area below the rim and flangelike rim may have been designed to hold the cover in place. There is a form of decorated incensario lid from the late Tres Zapotes horizons with a flat rim which would seat quite well in a rim of the sort just described (see above; also pl. 56, *c*, and fig. 41, *h*).

Another form of incensario consists of an open curved-side bowl set on an annular base. Usually the base tends to be tall, and ordinarily is slotted although short imperforate bases occur (pl. 16, *e*; fig. 41, *k* to *m*). Sharp appliqué bosses often cover the outside of the bowl. This form may be slightly later at the site than the preceding.

Only two fragments of the "frying-pan" type of incensario have been found at Tres Zapotes (trenches 1, 23), although there are several pieces of this sort in a small collection from Loma de Alonzo Lazaro, a site 20 or 30 miles away.

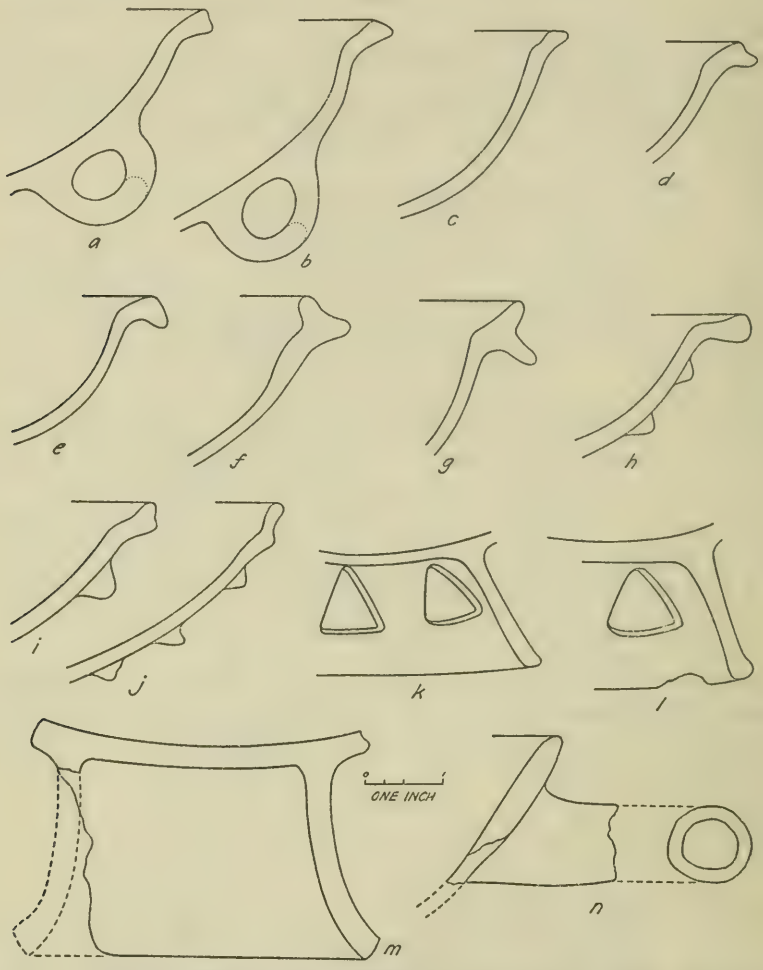

FIGURE 41.—Incensario ware. *a* to *g*, loop-handled type; *h* to *j*, bossed type; *k* to *m*, annular bases; *n*, rare "frying pan" type.

SLIP

The incensarios do not seem to have been slipped or painted. One specimen purchased in the 1939 season, and one or two sherds excavated in 1940 have a dark red paint, but these are exceptions to the general rule. The rough finish of surfaces, inside and out, and the lack of care with which attached elements such as handles and bosses were made is a nearly constant feature of the ware. The handles are

often irregular in cross section and stuck on askew; the bosses are pinched-up pellets of clay, not equal in size or spacing.

COMALES

The objects forming this group are distinctive in all respects from other local wares. Obviously, they were intended to serve some particular function for which their material and form were especially suited. They have been identified tentatively as "Comales," or tortilla-griddles. To emphasize their distinctiveness it seems worth while to add that sherds of this ware have a sharply defined vertical distribution in the deposits, being confined exclusively to the upper levels.

PASTE

The ware is made of an extremely gritty well-fired paste. The color is usually light sandy buff (13″ *d*, light vinaceous-cinnamon, to 15″ *d*, light pinkish cinnamon). Vessel walls are rather thin; basal portions markedly so. The heavy tempering protrudes from the surface so much that the thin wash some sherds retain does not alter their sandpaperlike roughness.

VESSEL SHAPES

Since no complete examples of the Comales have been found, it is necessary to reconstruct their form as well as possible from fragments. They appear to have been wide, flat-bottomed, and shallow (fig. 42, *a* to *f*). The vertical walls seldom rise more than 3 inches above the base. Walls and base are connected through an irregular curving joint. The walls increase in thickness from joint to rim, with bumps and ridges suggesting careless workmanship. The horizontal curvature of some wall sherds suggests that the vessels may have been elliptical rather than round in plan. If they were quite round, some of the Comales must have been between 2 and 3 feet across. Rims are thickened, and usually either beveled or channeled. A few rounded rims occur. Loop handles, attached horizontally on the wall exterior, are common (fig. 42, *c* to *e*). Presumably there were two on each comal. A variant type of handle associated with the rounded rims comes off the rim, slanting outward about 20° to 30° from the vertical (fig. 42, *f*).

SLIP

None of these have a true slip. A few sherds have traces of a thin wash, grayish brown to light brown in color. Many lack the barest trace of even such a wash.

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DECORATION

As befits a strictly utilitarian ware, the Comales were scarcely ever decorated, either by paint or incising. Among the exceptions is a horizontal handle with two circles stamped near its joint with the wall. The circles and the outline of the handle give a peculiar reptilian

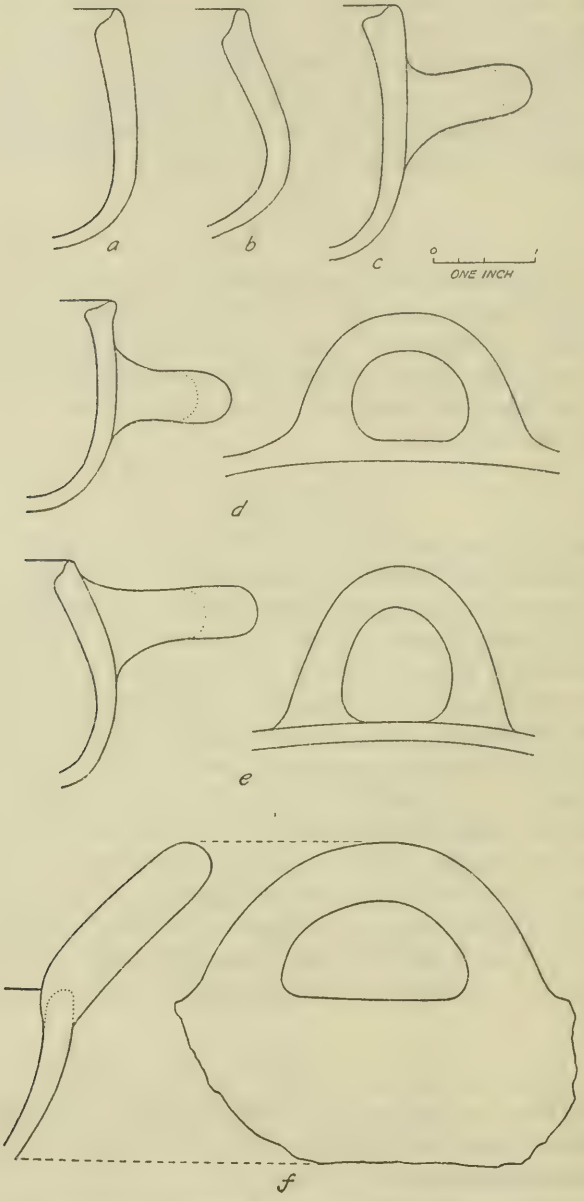

FIGURE 42.—Comales, showing profiles and handles.

effect. In 1939 a pair of handles was recovered with modeled lizards' or snakes' heads on them.

UNSLIPPED OLLAS

A fairly large proportion of sherds from every level dug consisted of "raked" olla-body sherds, and fragments of necks and rims, which have a thin wash of clay, or no slip or wash at all, or perhaps which have lost the slip or wash they once had. These sherds were segregated, but not included in the final counts.

PASTE

The paste of which these sherds are made is coarse with temper, buff to gray in color. It resembles some of the coarser varieties of Brown ware very closely; indeed, there is some question as to whether many sherds could not be classed as an off-color variant of Brown ware.

VESSEL SHAPES

The ollas from which these sherds come seem to have been fairly large round-bodied vessels, some of which had round and some flat bases. The necks are of the same varieties as those of Brown ware ollas; both plain and ridged ("complex") varieties of neckless, short, and long necks occurring. Punch-marked faces also are found on the necks. A new neck and rim form is a widely flaring neck with a rolled flared rim (fig. 43, *a*). This is an Upper-horizon form.

Also late are wide, rounded triangular tabs or lugs, probably in pairs. Two examples of rim fragments associated with the lugs are of the neckless type with rounded rims. The lugs are set high up on the vessel body, and instead of extending out horizontally or slanting downward as one might expect them to, they slant upward at a steep angle (fig. 43, *b*). Another late feature is the application of sturdy loop handles. Their position on the vessel is unknown.

SLIP

As remarked, these ollas have no slip. Many have a thin wash, ranging in color from thin creamy white through pinkish buff shades to tan (13″ *d*, light vinaceous cinnamon, to 15″ *b*, pinkish cinnamon, to 17″ *d*, vinaceous-buff). Quite as characteristic of these ollas as their surface color is their finish. Invariably, their exteriors are "raked," apparently brushed over with a handful of grass or a coarse brush. The marks vary from light to quite heavy. The raking appears to have been begun at or near the base of the neck, in sweeping strokes that slanted downward slightly in going about the vessel. Places where two sets of strokes meet have a herringbone texture; this was not used to form decorative patterns, however. This treat-

ment may have been meant to increase heat absorption. Many of these vessels show unmistakable evidence of having been used for cooking, though others were perhaps for water or storage.

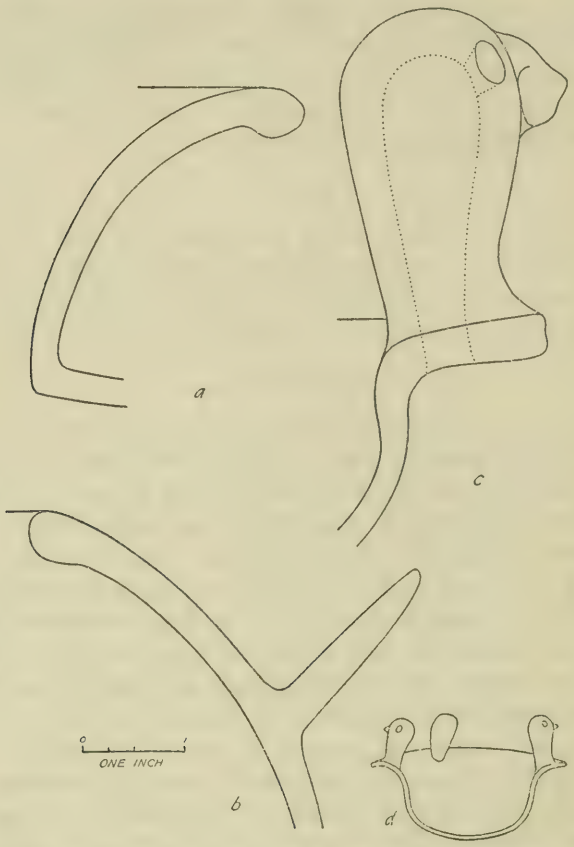

FIGURE 43.—Upper phase Unslipped Olla types and vertical modeled lug. *a*, Wide flaring externally rolled rim olla neck; *b*, slanting triangular lug; *c*, vertical modeled lug; *d*, hypothetical reconstruction of vessel with vertical modeled lugs.

MINOR WARES

A few wares known to occur at Tres Zapotes have to be classed apart because, due to their low frequency, they were not encountered in quantity in the 1940 stratigraphic sections. Their placing in the ceramic column can be for the present tentative only, dependent on their association with what appear to be isolated horizons. It is not beyond the bounds of possibility that some may be imported, not locally made, although enough examples of them were recovered in the general digging in 1939 and from certain mound sections in 1940 to make this unlikely.

CARVED WARE

Carved ware, that is to say ware with human figures carved in relief, is none too common at Tres Zapotes. Fortunately, a very few sherds of this kind were found in determinable associations; one each from relatively shallow levels in trenches 1 and 2, and one from trench 24. Two others were brought in for purchase. The specimens are illustrated in plate 22, *a* to *e*.

The carving varies from shallow to deep. In one instance (pl. 22, *b*) it was done after the vessel had been dried, but before slipping and firing; in the rest, it seems to have been a post-firing process. Stylistically, the designs have no local affinities, with the possible exception of the plaque tentatively identified as a vertical flange or grip of an incensario lid (1939 collection, pl. 64). Similarly the wares do not seem to fit into the local series. Two specimens (pl. 22, *b*, *d*) retain traces of a light orange slip unusual at Tres Zapotes, and are of pastes apparently different from the local ones. Plate 22, *c*, has a neutral brown slip on the inside, a square rim, and is of a fine-grained paste with a small amount of fine tempering material—all features anomalous in Tres Zapotes wares. The other two are of a (smoked) black ware, similar in texture and temper to that just described. One (pl. 22, *a*) has a rim with a long sloping inner bevel. All in all, the evidence at hand suggests these are imported specimens, and that the occurrence of this type of material in the Upper phase indicates culture contact with other regions, rather than growth of local artistry.

LOST-COLOR WARE

An attractive ware with designs done in what appears to be a Lost-color technique occurs in the Tres Zapotes deposits in small amounts. Rather more of it was found during the 1939 season than in the following one. The paste is ordinarily moderately gritty, buff in color, often with a black core (very much like certain varieties of Brown ware). It is nearly always quite thin. Once a typical example was found (trench 23) in which remnants of a Lost-color design occurred on the base of an Orange-slipped Polychrome bowl. The characteristic vessel form is a small open bowl with curved sides, set on three cascabel or short cylindrical feet. Both inner and outer surfaces are decorated.

The designs are applied to well-polished surfaces. Negative (painted) portions of the pattern are black or dark brown, the design itself buff to orange brown. The designs consist of curvilinear masses—circles, ovals, and round-lobe figures—many of which suggest floral patterns. I have not, however, seen any complete enough to be sure whether they are really representative of pure geometric designs.

VESSELS WITH VERTICAL MODELED LUGS

There is a group of vessels which on the basis of paste and absence of surface paint might be included with the Unslipped Ollas. These seem to have been (no restorable examples have been recovered) very large open bowls, probably shallow, with flat everted rims and curving sides. They were made of a coarse paste the same in color and texture as the coarser variety used in the ollas, and have no slip. They are very definitely a local type, coming in great numbers from the nearby San Marcos site which belongs to the late Tres Zapotes horizon. The distinctive feature of these vessels, the one of which the greatest number of examples have been recovered, is the application of cylindrical vertical lugs or handles to the wide everted rim. Probably there were three such handles in the case of certain Teotihuacán vessels whose lugs these resemble closely.[19] The lugs are hollow, the aperture continuing down through the vessel rim, and are often of an inverted pear shape. Some, by means of a minimal amount of treatment, represent bird or animal heads. Two large holes perforate the wall of the lug on the outer side, and a dab of clay is put on for a beak, or a third hole is punched through for a mouth (fig. 43, *c*). The decoration of the lugs ranges from such simple forms as these to very elaborate ones, with well-modeled, if often grotesque, features (pls. 40, *a* to *d*; 42, *a*; 47, *w*, *x*).

FIGURINE TYPES

The custom of making small clay figures, representing human beings, animals, and monsters, so widespread throughout Middle America, prevailed all during the occupation of the Tres Zapotes site. Our ignorance as to the functional significance of these common objects hampers classification of them—this is no new plaint where figurines are concerned, but germaine to the present material. Not only do they occur as isolated objects—little complete figures—but some stylistically the same are made into small effigy pots, others, chiefly heads, are stuck onto vessels as appliqué ornaments, and still others are fashioned into whistles and ocarinas, or attached to flutes. For present purposes, however, such variations of application are not considered prime classificatory criteria. All small figures, in the round or in relief, are grouped according to technique of manufacture, style, and ware. Their uses as vessel ornaments or musical instruments will determine minor subdivisions within the major groups. The warrant for this treatment lies in a broad interpretation of the functional aspect of these objects. If, as has been suggested, the small isolated figures were made to be used for religious purposes,

[19] Linné, 1934, p. 114 ff. The Teotihuacán vessels, however, have straight slightly flaring walls and flat bases, the lugs slant inward more, and have a hole on top.

a vessel supporting identical figures may be thrown in the same category, for it is at least an even bet to have been intended for ceremonial use, in distinction to the ordinary run of pots. To state the case negativistically, "function" may have little value as a criterion of classification of archeological material as compared with formal characteristics, as long as we lack detailed knowledge of all aspects of the supposed function.

Classified on the basis of technology and style, Tres Zapotes figurines fall into three main typological divisions: The "Tres Zapotes" hand-made, the "San Marcos" hollow-molded, and the "Lirios" large, hollow-modeled types. There are also two minor groups, represented by a very few specimens each, which further investigations in the region may show to be divisions of equal rank with the preceding. One of these is associated with intrusive Soncautla material; the other is from surface collections and without definite ceramic associations.

"TRES ZAPOTES" HAND-MADE FIGURINES

"Tres Zapotes" hand-made figurines are the earliest and, as well, the most numerous of all at the site, and may be considered the outstanding local type. Most of them represent human beings; a few are animals, chiefly monkeys and birds. While the great majority of these figurines are solid, the makers, with a seeming disregard of consistency, fashioned occasional hollow figurines in the same style as the solid ones. However, complete hollow examples seem invariably to be whistles or small effigy pots. It appears safe consequently to consider hollow fragments of the type as aberrant only because of some specialized use. The hominid figurines for the most part represent females. There are so few complete specimens that it seems as though they must have been broken intentionally, but one may assume that the heads and torsos from the same levels belong together.

Most of the figurines of this type are made of a coarse reddish-brown paste (9′*k*, Kaiser brown, to 11′*i*, Cinnamon-rufous) with a heavy sand temper. This is closely akin to the common paste of the Tres Zapotes Brown ware, although usually less well fired than when used for vessels. Some better-fired figurines are of a buff paste (17‴*d*, Vinaceous-buff). A few specimens in a Black or Gray ware correspond in other respects to the specifications of the group.

While the objects are hand-made, and decorated quite simply with bits of appliqué and punctate or incised features, it does not follow that they were haphazardly rolled and punched out of odds and ends of clay. A few specimens that succumbed to the vibrations of shipment give insight into the manufacturing technique used (pl. 65, *s*, *v*). To form the head, a stem or stub was left protruding from the body in the region of the neck. This was worked out to a long flat stem, whose length and width were those of the head without its headdress. A

round little pat of clay was stuck on the front of the stem for the face (it is hard to determine whether the features were marked on before or after this operation). Then the turban, or in some cases the hair, was put on as a separate piece, covering and sealing the joint between face and stem.

This detailed account is given for one purpose. As will be demonstrated, these hand-made figurines belong to the early horizons of the site, and can be shown to have a respectable antiquity, as Middle American materials go. Yet at the same time there is nothing "archaic," in the sense of developmental or rudimentary, about them. The conventionalization of features and rigid standardization of types suggests an end product of cultural evolution, not a beginning. Even the manner in which these figurines were made was a well-established pattern more elaborate than their outward form would suggest, and clearly points to a long period of development—a period the remains of which are still unfound.

HEADS

Stirling worked out a typology of the Tres Zapotes hand-made figurine heads collected in 1939, in which he defines six classes. These six are evenly divided between two broad technological divisions: I, Punctate forms, in which facial features, eyes, nostrils, and mouth are indicated by punched holes; and II, Modeled and Incised forms, with features represented as the name indicates. The first of the Punctate types, subtype A (pl. 26, *a*), is characterized by elaborate turbans, subject to great individual variation;[20] and wide heavy-jowled, slightly prognathic face. The eyes are represented by two semilunar impressions or incisions whose ends point downward, with deep central perforations representing the pupils. The nose is a pinched-up ridge of clay, long, of medium width, straight bridged. Two perforations indicate the nostrils. Lips protrude slightly (sometimes are appliqué), and are parted by a horizontal incision with two deep perforations in the corners. Ears may or may not be represented, but large circular earplugs are invariably present. A very few specimens have nose or cheek plugs.

There are a few examples of a masculine variant of this type, distinguished by a short, pointed beard. These often have a vertical ridge extending from the back of the headdress down the head, differing in this respect from the ordinary flat or slightly concave backs on most subtype A heads.[21]

[20] It is interesting to compare the turbans represented on these figurines with a woman's headdress still in use in parts of Oaxaca (see Stirling, 1940 b, p. 361).

[21] Stirling has refined his classification into a number of subtypes, based on stylistic details, particularly treatment of ears and ear ornaments in which a number of distinctive patterns occur. However, because of the limited amount of stratigraphic figurine material, it does not seem practical to attempt to apply the more refined classification at present.

Some of these figurines were given a coat of asphalt in lieu of paint. Probably most of them were originally painted, but few retain even traces of pigment, owing to the softness of the clay.

Subtype B heads differ from the preceding in facial proportions (pl. 26, *b*). The eyes, made by the same technique, slant downward toward the inside, and are set lower on the cheeks. The nose is an enormous blob of clay, very Armenoid in profile. The lips protrude more than in subtype A. Nostrils and corners of the mouth have the same sort of perforations. Hair is sometimes shown in bangs across the forehead and hanging down over the ears. Headdresses are varied, but two types predominate: an elongated turban, and a low headdress with a crescentic ornament hanging over the forehead. Earplugs are nearly always shown.

Subtype C heads are similar in many respects to subtype A (pl. 26, *c*). The chief differences are that the hair is usually shown in two hanks down the sides with a broad forelock running back over the top of the head, and headdresses are small or lacking; the face (perhaps owing to the absence of the high subtype A turban) seems wider and rounder; and earplugs are ordinarily larger than in subtype A. There is also a tendency for these heads to be larger than those of subtype A, although some very small examples occur. The same punctate technique is used for representing the features.

The remaining types differ from the Punctate group not only in technique of representation but in firing. While most of them seem to be of Brown ware paste, they are better fired; few are of the soft, poorly fired paste so characteristic of subtypes A, B, and C.

Figurine heads of subtype D are proportionately very narrow and long, with vertically concave backs (pl. 26, *d*). The headdress varies; turbans, hoods, and what seem to be small conical hats are represented. The face is rather flat, with a triangular appliqué nose, and a dab of clay below it for the mouth. In some the mouth is indicated by an incised horizontal line, in a few instances with perforations at either end. Eyes vary considerably; probably most often they are indicated by straight or slightly curved slits. In other cases, an open almond-shaped eye is incised, either on the face or on a dab of appliqué, with a central perforation to indicate the pupil. Presumably the forms with punctate eyes and mouths are transitional or hybrid combinations of subtype D and the Punctate types. Ears and earplugs are present only exceptionally.

Subtype E heads are of the "baby-face" variety (pl. 26, *e*). They are often more realistically modeled than are the foregoing types, with eyes, cheek contours, and the rest skillfully represented. They lack headdresses and earplugs. The hair is shown short, frequently with a forelock hanging down over the forehead. Perforations, except for a few very light ones for nostrils and infrequently at mouth cor-

ners, are absent. The class could be subdivided, had we enough specimens to make it worth while, on the basis of eye form.

Subtype F heads appear to be a hybrid group (pl. 26, *f*). Some are made of the same poorly fired clay as the Punctate group. The faces are quite round. Rather short hair is indicated, often with a foretop as in subtypes C and E. Headdresses are rare. Eyes and mouth are mere incised slits, the nose a broad triangle of clay with nostrils often represented. Many specimens have perforations or vertical slits in both cheeks representing aged, sunken-cheek individuals. A good many retain traces of white paint; one specimen has a white face and red-painted hair.

BODIES, ARMS, AND LEGS

Solid figurine bodies do not vary so widely in type as the heads, but there are several distinct styles of representation. Because of the fact that so few complete or restorable examples have been found, it is not certain just which style bodies belong with which heads, though the material from the stratigraphic sections suggests some associations.

In general, the bodies seem to have been disproportionately small for the heads, and not nearly so much care was spent upon them as was lavished on the faces and headdresses. There are two main types, with a third specialized subgroup. The first type is rather flat, with an exaggerated wasp-waist. It is a graceful impressionistic treatment of the female human figure. The breasts are not emphasized, as a rule, although some specimens have swollen breasts and abdomens suggesting pregnancy. Dress, represented by appliqué, when present is usually confined to necklaces and breech clout or pubic cover. Brief skirts are occasionally represented. These figures may be standing or seated, in the latter case with the legs outstretched, or crossed Turk-fashion. Legs range from unmodified tapering stems of clay to stubby forms with heavy modeled thighs and reduced lower legs. Feet are usually not indicated, although sometimes represented in simplified form. Arms may be in various postures. They are often stubby, with sketchily indicated hands.

The second type of body is stratigraphically later in the Tres Zapotes deposits. Complete examples found in 1939 had heads of subtype B on this type of body, but the association may not have been invariable. These bodies are quite short and wide, with angular outline. The legs are set far apart. They are nearly rectangular in cross section, tapering slightly toward the foot, usually with no modeling whatsoever. The feet continue the line of the legs, with three or four vertical incisions to suggest the toes, and have a deep notch on the bottom, giving a high-heeled boot effect. Arms are very sketchily indicated as a rule. There is usually more appliqué ornament on these figures than on the preceding type.

A third type or variant is more nearly round in section, with stubby legs and a tripod support. Another form has a sort of dome-shaped socket on the back, which in complete examples can be seen to have been a rude whistle. These last figure types more often represented males rather than females.

ANIMAL FIGURINES

A group of figurines representing animals shows its relationship to the Punctate figurine group in mode of treatment and in ware, as well as by stratigraphic association. Most of these representations of animals are whistles, and are, therefore, hollow. The mouthpiece is usually at the rear, and has a flat channel over which a strap of clay is arched to direct the air over the edge of the hole. Birds, apparently raptorial species, and monkeys are the most common forms. Eyes, nostrils, etc., are usually indicated by perforations. The eyes ordinarily are indicated by a circlet of clay, rather than by a slanting or curved line as in hominid figures, with a central perforation. A number of small bird-whistles have pierced vertical flanges on the head or back, apparently for suspension. Asphalt covering is very common in these whistles.

EFFIGY POTS

A few examples have been recovered of both Punctate and modeled figurines made into miniature vessels, by enlarging and hollowing out the body, or by applying heads of this kind to the wall of the vessel (pl. 35, *q*). The treatment of this figurine does not differ from that already described.

SAN MARCOS MOLD-MADE FIGURINES

Hollow mold-made figurines characterize the latest phase of the continuous occupation at Tres Zapotes (prior, of course, to the intrusive Soncautla horizon). This type is named after the site at San Marcos, ten or a dozen miles from Tres Zapotes, where the Upper phase occurs as an isolated horizon.

It seems preferable to give only a brief summary of the distinguishing features of this figurine type at the present time. A full description can be given best in connection with an account of the type station at San Marcos, from which many more complete specimens have come.[22]

Typically rather small, the figurines are made of a fine buff paste which seems to be nearly the same as that used for the local Polychrome ware. Many specimens, in fact, retain traces of a white, a

[22] An account of investigations at San Marcos and a description of materials from that site is intended to follow the present paper.

creamy, or a buff slip, and a few have indications of paint. There are some made of a gritty paste, but they are of less common occurrence.

From fragments of molds which have been found, as well as from the figurines themselves, it is possible to determine the technique of manufacture. Most of the figurines have their modeling on the front only, and that in low relief, so that a single mold served for making them. The backs are simply plastered over, with no attempt at decoration or careful finish. In a few instances, however, such as the animal figures from the cache in trench 23 (pl. 49, *a* to *b*), several molds were used, and the parts skillfully joined. Such joints and mold seams were scraped down before firing.

One of the salient features of the type is its amazing variety of form, as compared with the earlier solid type with its limited range of subject matter. Human beings, animals, and monstrous creatures are represented both realistically and in conventionalized form in all conceivable poses. As regards the human figures, it may be significant that there are more males represented than in the case of the Tres Zapotes hand-made. To this group belong the heavily gowned figures with upraised hands (pl. 50, *k*), nearly identical to specimens in the Museo Nacional from Tabasco, and examples approximating the "Totonac" laughing-face variety, with typical slanting forehead, wide headdress, and open mouth with prominent incisors (pl. 39, *n;* 47, *a*). Old men with belts in the form of a serpent (pl. 48, *a*, *b*, *d*), armed warriors (pl. 48, *c*), and many other subjects are represented in this type. Another variety has separate solid arms and/or legs with holes at the proximal ends by which they were pegged to the molded body of the figure (pl. 47, *l*). The animal figures very nearly exhaust the faunal resources of the region. Jaguars are a favorite subject, as are monkeys and coati-mundi. Other subjects include deer, rabbits, dogs, toads (or frogs), turtles, and numerous kinds of birds. Monsters often have animal heads with human bodies. These may represent supernatural beings, or perhaps masked men. Fragments, apparently of headdresses or ornaments of hominid figurines are found which portray long gracefully curving plumes, reminiscent of the quetzal feather ornaments of regions farther south.

The uses to which these figurines were put were nearly as varied as their subject matter. Some are simply figures with no additional features; others are whistles (pl. 41, *d*, *f* to *j*, *n*,), and very often rattles, also, for they contain small pellets of clay. Still others were ornaments for flutes and panpipes (pl. 41, *e*), and some few were attached to vessels. A noteworthy example of this class is an olla in the 1939 collection on the hooded rim of which a striking face has been molded (pl. 12). A miniature spouted vessel of the same kind, and heads from the rims of two others have been recovered.

LIRIOS MODELED FIGURINES

A completely different artistic and technical tradition is manifested in a group of large hollow figurines which were modeled by hand. The first examples of this type observed were brought in in 1939 from a site at Lirios, on the Arroyo Hueyapan a few miles above Tres Zapotes, hence the name. As to temporal placing, the type appears to be contemporary with the San Marcos molded figurines: Fragments of both occur in the same stratigraphic levels at Tres Zapotes; some Lirios-type specimens have been found at San Marcos; and the trench 20 deposit at Tres Zapotes, which seemed to be a dump or cache mainly of this type of figurine, included a few very typical mold-made figurines. In the face of all this evidence, it is difficult to conceive of two art styles so different flourishing at the same time and place. That they could do so must mean that the societal setting which produced them was of no simple "primitive" type, but in complexity more like our own, wherein differences of interest and function permit the coexistence of art styles as varied as those of a Benton, a Dali, and a Disney.

The Lirios type figurines for the most part are made of a reddish brown paste, very similar in color and texture to that of Incensario ware. A few specimens are of a markedly sandy paste; occasionally one is found which is made of a fine-textured paste similar to that of Polychrome ware. No painted examples have been found except for one red-painted fragment from trench 10, although it is possible that some perishable pigment was used on them. Surfaces vary from well smoothed to roughly finished ones which still show work marks and occasional fingerprints. The applications of the figurines range from heads attached to vessel rims and incensario lids, to isolated figures complete with bodies and limbs. Some of the latter have hollow spoutlike projections from the top of their heads, and may perhaps have been effigy pots.

Not only in technique, size, and paste are these figurines distinctive, but in subject matter as well. The faces are for the most part those of men rather than animals and monsters, and they have a painstaking attention to detail that suggests that they must be portraits of real individuals. In this regard they are poles apart from the stylized mold-made figurines as well as from the early solid types. This does not mean that conventionalization of form does not occur, but it is accentuated in appurtenances; in headdresses, bodies, arms and legs. The realism of the faces is brought out more clearly by the contrast. One of the means by which this realism is achieved is the variety of facial expressions depicted. Few of the faces are placid; smiles, laughs, and scowls are all represented. Many different physi-

cal types are shown, ranging all the way from that with a wide face and thin high-arched nose to the heavy-featured, almost negroid type of plate 61, *b*. Rather few of the faces approach the type that one thinks of as "Indian." One such is the hollow-cheeked saturnine visage shown in plate 62, *i*. Many of the figurines are bearded (pls. 55; 56, *e;* 60, *a*). Aged individuals, with seamed and sunken cheeks, are fairly common (pls. 56, *a;* 61, *g*, *h*).

The bodies to which some of these heads were attached were relatively small and somewhat shapeless (pls. 58, *e*, *f;* 56, *e*, *f*). A few fragmentary pieces in the collections indicate cloaks or capes, with elaborate ornaments (pl. 63, *j*, *k*). Arms and legs were hollow tubes of clay. Some are unmodeled, with little resemblance to the analogous human appendages (pl. 63, *s*, *t*); others have well-developed contours, like the bony knee and thigh shown in plate 63, *r*. The treatment of the hands is especially characteristic of this figurine type. These members are stuck on at the end of the tubes that represent arms, and consist of four gracefully curving but apparently boneless long fingers and a thumb (pl. 63, *m* to *q*). For some reason feet did not strike the makers of these figurines as equally interesting problems for representation, for they are indicated rather cursorily (pl. 63, *s* to *x*).

One of the chief technical devices used in the Lirios figurines is appliqué. Headdresses are composed of a series of strips of clay superimposed in a particular pattern (pls. 56, *a;* 60, *e;* etc.); earplugs, as well as the ears themselves, are made of separate pieces of clay welded onto the head (pls. 55; 56; etc.); beards no less than articles of dress are represented in the same fashion. The elaborate bracelets so typical of this group are not carved or modeled from the same piece as the arm, but are slender rolls of clay, knotted into the desired form and stuck on (pl. 63, *j*, *o*, *p*, *q*).

A miscellany of traits represented in the specimens of this type may be commented on here. One piece, a decorated incensario lid fragment, strikes a familiar Middle American note in having the head shown in the open jaws of a conventionalized serpent (pl. 56, *c*). This may be a good place to mention that these incensario lids often had wide vertical flanges for handles or lifters (pls. 55; 25, *g* to *i*); the carved plaquelike object in the 1939 collections (pl. 64) is probably such a lifter. The posture of many of the heads, strongly tilted back, is reminiscent of the "Totonac" laughing-face figurines. As a matter of fact, the type of mouth typical to these last-named forms—open, with accentuated incisors—occasionally may be seen on a Lirios-type figurine (pl. 61, *f*). Mat impression on the backs of strips of clay are not uncommon (pl. 25, *e*, *f*). Probably the strips were worked out flat while laid on a checker mat.

There are a few points of detail which are of interest in corroborating the temporal placing of this material as previously stated. One of these is the use of stamped circle elements in design (pls. 60, *e;* 61, *f*). This decorative technique is found only in Upper phase pottery vessels, as will be brought out in the stratigraphic analyses. It is likewise significant that one of the rare clay animal figures done in the Lirios method is a small jaguar head in which the conventionalizations of the mold-made figurines—the large round ears and bared fangs which identify the creature—are duplicated (pl. 62, *e*).

MINOR FIGURINE TYPES

There are a few specimens in the collections of figurines which differ to such an extent typologically from any of the foregoing three major groups that they must be treated separately. There are several possibilities concerning them: Some may be merely freak forms, they may be true distinct types, or they may be actual trade pieces imported from other regions.

In the cache found in trench 23 were eight pieces, four heads and four headless bodies, which seem to belong together (pls. 53 and 54). They are made of a coarse, poorly fired clay, with a peculiar olive-drab slip. The bodies seem excessively crude and roughly modeled, with garments represented by strips of clay. One of the bodies has a short stem at the neck (pl. 53, *h*); probably the others formerly did also. The heads are at first glance as crude as the bodies, but inspection brings out the bold strength with which they were fashioned. They are hollow, with finished edges on the under side. Two represent jaguars, and two represent goatsuckers. Since the bodies are of two kinds, one pair with short flaring skirts and the other with some sort of composite jacket or armor, it seems likely that one set of heads went with one set of bodies. Probably the heads were set over short stems which prevented their falling off but allowed them to move. These are the only objects of this particular ware and general treatment from the site save for a fragment (apparently a toadlike leg) from trench 20 (pl. 62, *c*).

Another variant type is represented in plates 39, *o* to *r;* 40, *o* to *q*. The specimens shown were brought in by local people who found them on the surface of the ground, so their ceramic associations are unknown. These figurines are unmistakably different from any others from the site. They are quite flat, very angular in outline, with wide heads or headdresses, and crudely indicated bodies and limbs. They look as though they might have been cut out of a flat strip of clay. Some have eyes of the "coffee-bean" variety. Probably these figurines belong to a post-Tres Zapotes occupation—either that of the Soncautla complex or one not yet isolated.

A third type is represented by few examples only, but fortunately its ceramic relationships are known. These figurines have wide triangular flat heads sloping to a thin edge at the top (pl. 23, *c*, *d*). Facial features are indicated by slits. The bodies are nearly cylindrical, either solid or hollow. Arms and breasts are crudely represented. Typologically speaking, these objects have no relationship whatsoever with the skillfully made figurines of the Tres Zapotes deposits. Their provenience agrees with this incongruity of form. Two specimens of this type were found in trench 10 in an intrusive pit containing vessels of the Soncautla complex.

A fragmentary figurine head from the uppermost level of trench 13 may be mentioned among the aberrant forms (pl. 31, *b*). In a collection from another locale—that of central Veracruz—it would cause no comment, however, for it fits in every respect in the figurine pattern of that center. The inverted-triangular outline, the facial contours, and the treatment of the eyes with their modeled lids all are definitely not the Tres Zapotes tradition. Several other specimens appear to have the same source (pls. 38, *c*, *i*; 46, *a*, *b*, *f*; 47, *h*).

MISCELLANEOUS OBJECTS OF BAKED CLAY

A few minor classes of pottery objects remain to be considered. None of them are numerically important in the Tres Zapotes collections, compared with potsherds or even with figurines. Despite their low frequencies, however, certain of the classes are important diagnostics of the phases of the ceramic column, and others have value for comparisons with nearby culture provinces.

In view of the small quantities of these objects, no attempt will be made at refined typological classifications of them. It may be that the evolution of the various types and subtypes can be determined by future investigations, and that the varying forms will be shown to have chronologic significance. For the present, however, long and detailed descriptions can serve no useful end.

MOLD-MADE SPINDLE WHORLS

As a class, mold-made spindle whorls (and the molds from which they were made) occupy a restricted space in the Tres Zapotes ceramic column, being confined strictly to the uppermost horizon. The distinguishing features are a flat or nearly flat under surface, a convex upper surface, often decorated, and a cylindrical central perforation. In size, the spindle whorls tend to be small as compared to Highland types. (Linné, 1934, pp. 126–127; Noguera, 1935, p. 159.) A transverse diameter of 1 inch would be about average; very few exceed an inch and a half in this dimension. The variations in form are much greater than that of size (pl. 65, *a* to *m*). Cross sections

range from very low conical to steep-sided truncated conical to nearly hemispherical. A few specimens, even more varied, have gently sloping edges with an abruptly rising peak in the center.

Decoration, painted or in relief, or both, occurs on a fair percentage of specimens. It is possible that many of the objects undecorated at present were formerly painted. The most popular, or at least most permanent pigment, was asphalt, applied most often in all-over coats, although some designs in this paint occur. Relief patterns include both geometric ones of circles, straight lines, and arcs, in various combinations, and representative motifs. The most highly conventionalized are those with a central peak which has been modified to represent the snout of an animal (the perforation forms the mouth), with one or two pairs of eyes on the flat edge (pl. 65, *j*). A few examples display elaborate human figures in low relief (pl. 65).

POTTERY DISKS

Disks made of potsherds occur in small numbers in all horizons, though chiefly in the earlier ones. Most of them are perforated at the center; it may be that all of them were meant to be, and that imperforate examples are merely unfinished. The function of the objects is unknown. They may have been spindle whorls (the perforated ones at least), gaming pieces, or something entirely different. The mode of manufacture is pretty well illustrated by examples in various stages of completion. A flattish sherd was chipped about the edges until it was nearly round. The drilling, when done at all, seems usually to have been done at this stage. Most specimens show traces of biconic perforations, subsequently reamed out to nearly cylindrical form. Next the edge was ground down smooth.

Special mention should be made of the disks from the cache in trench 23, which differ from all others from the site in not being worked-over sherds, but made originally in the disk shape, with central perforations made while the clay was still soft (pl. 50, *g-j*).

GROOVED CLAY BALLS

The collections include a small number of globular to slightly elliptical clay balls grooved about the middle (pl. 45, *b*, *c;* pl. 65, *n* to *p*). They are mostly from three-quarters of an inch to an inch in diameter. Their form indicates that they were meant to be suspended; they might have served as loom weights, or even as leads for small fishnets.

SEALS

Seals occur in two forms: one with the design area flat (pl. 41, *dd*), usually an elongated rectangle, and with a short stem protruding from the back (pls. 28, *u;* 34, *x;* 41, *x*, *y*, *z*, *cc–ff;* 47, *m*), and the other

type cylindrical (pls. 32, *s;* 41, *aa*, *bb*), with a longitudinal central perforation. Designs made by carving the soft clay vary from geometric to representative. Too few specimens came from the stratitests for conclusive evidence as to temporal differences in shape or in type of design. The fact that so many representative designs come from the late-horizon site of San Marcos suggests that these may be later than the geometric patterns.

CANDELEROS

A few of the objects designated "candeleros" have been found at the site. They are exclusively confined to the Upper Tres Zapotes horizon. Most of them are rectangular lumps of clay with two deep pits in the upper surface. None are decorated. One specimen (from trench 24) looks as though it may have had a small transverse loop handle between the pits (pl. 47, *y*).

MUSICAL INSTRUMENTS

Whistles and ocarinas, so often zoomorphic in form, have already been described under the heading "Figurine Types" (p. 76 ff.), and the possibility that certain peculiarly shaped objects of Polychrome ware may have been drums has been suggested (p. 41). In addition, both flutes and panpipes occur. The flutes are long tubes, end-blown, with a mouthpiece of the same type as that used for whistles. Elaborate ornaments—either flat plaques or small figurines adorned the distal ends (pls. 41, *e;* 47, *c*).

Several fragments of panpipes—small clay tubes of various lengths joined side by side—have been found. Their upper ends are open, and meant to be blown across.[23] Clay panpipes have not been reported elsewhere in Mexico, although Beyer (1920, p. 182 ff.) has pointed out their probable occurrence, as indicated by a figurine (from southwest Mexico?).

CLAY ORNAMENTS

A number of clay objects seem to have been designed to serve as articles of personal adornment. These include earspools, pendants, and finger rings. The ear- (or cheek?)[24] spools are pulley-shaped pieces, and up to an inch in diameter. Some are solid; others are hollow. One fragment—a purchase specimen—has a design incised on the outer surface. The finger rings are plain bands of clay. Most interesting among the articles used as pendants are the clay jaguar incisors. The bigger-and-better idea seems to have inspired the

[23] A nearly complete specimen from San Marcos will be described in the account of materials from that site.

[24] A very few solid hand-made figurines have appliqué ornaments suggesting cheek plugs.

makers, for the clay teeth are considerably larger than the genuine article (a few examples of which, drilled for suspension, have been recovered at the site). Occasional figurine heads have perforations made subsequent to their firing. Aside from the last-mentioned drilled-figurine pendants, none of the objects described in this paragraph has been found in a stratigraphic section, and consequently it is not possible to place them as to horizon.

TRADE WARES

What with the lack of systematic investigations elsewhere in southern Veracruz, it is far from easy to recognize imported wares in every instance. Strebel's figures and descriptions of materials from his main sites in the central part of the State (Cerro Montoso, Ranchito de las Animas) are full enough for the main types to be recognized, but wares from the intervening region are not clear enough in his plates nor fully enough described to be identified (Strebel, 1885, 1889, passim). Weyerstall (1932, passim) describes and figures only figurine types from farther up the Rio Papaloapan. Southeastward we must go clear to the Usumacinta to find comparative material; the great stretch between that river drainage and Tres Zapotes is archeologically terra incognita. Consequently, only the more flagrantly distinctive foreign wares can be recognized. Very likely there are a fair number of sherds from adjacent districts whose points of difference from the local wares were more subtle, which were dumped into one or another Tres Zapotes category. Regrettable as this may be, there will be no remedy until the archeological resources of southern Veracruz and western Tabasco have been properly explored.

The probability that some of the less common wares, such as Lost-color and Carved ware and certain variant figurine types, may have been imported has been mentioned but is impossible of proof as yet. It may well be that the Cerro Montoso shape bowl mentioned (p. 39) as a unique shape for the local Polychrome, which it resembles in slip, was of foreign manufacture.

There is no doubt as to the source of two vessels from the general digging in 1939 at the Ranchito locality. One is a large bowl with curving inturned sides, simple direct rim (pl. 24, *f*). The slip is red, with a black design in bands consisting of broad encircling lines and diagonal lines in crossed pairs. The upper band consists of stepped frets. The inner edges of the diagonals in the lowest panel are widened into steps, or serrated. Roughly drawn white circles occur at the intersections of the diagonals. The edges of the black pattern are outlined by post-firing incising. The interior of the bowl has a polished orange-brown slip or wash. The other vessel, also a bowl, is smaller and less strongly inturned (pl. 24, *d*). The slip is the same

orange brown as in the preceding vessel. Two black lines, one at the rim and the other about an inch below, form a strip filled with vertical ¾ to ⅞ inch-wide panels of black, red, and orange brown (slip), red, black, repeated in this sequence, each with two narrow vertical lines down the middle. Both these vessels are patently of Strebel's Cerro Montoso type.[25] According to Weiant's burial tabulation, they occurred with Surface (Cremation) burials, i. e., with what is considered here an intrusive late complex. A few sherds from vessels similar to the first were brought in in surface collections in 1940.

A figurine head from the uppermost level of trench 13 is unmistakably alien in type (pl. 31, *b*). The clay of which it is made is nondistinctive—granular and drab. It might have been made locally. The modeled facial contours and treatment of eyes and eyebrows, however, are certainly central Veracruz-inspired if not directly imported. There are several other pieces which indicate the same source (pls. 38, *c*, *i*; 46, *a*, *b*, *f*; 47, *h*).

One of the figurines from trench 20, the little death's head of heavily tempered buff clay (pl. 60, *b*), is probably a trade piece. It reminds one vaguely of some of Weyerstall's figurines (Weyerstall, 1932.)

From the cache in trench 23 came two figurines, at least, which are foreign in style. One is the white-slipped figure with facial and body tattooing indicated by patterns of raised dots (pl. 50, *f*). The slip of the piece is nearer a dead white than the normal Tres Zapotes Polychrome slip with which molded figurines were coated, and much thinner; the clay walls are also much heavier than the local type. There are said to be similar figurines in the Museo Nacional from Tabasco, probably from the site at Jonuta. The present writer, however, has not seen them. Another trade piece from the cache is the little figure with the animal-mask headdress and upraised arm (pl. 50, *k*). Paste and wall thickness are very similar to some local specimens, but the treatment differs. The mask or headdress in which wearer's face is framed by an open mouth is not a common theme at Tres Zapotes, although a few other examples are known in local figurines. Treatment of the hand and breasts, however, is definitely out of keeping with local modes. The general impression of the object suggests a foreign, if unidentifiable, style.

STRATIGRAPHY

The present chapter deals with the ceramic history of the Tres Zapotes site as revealed in the stratigraphic trenches. For the pur-

[25] Strebel, 1885–89, vol. 1; for form cf. pl. 9, fig. 9; design, pl. 7, fig. 22; technique, pl. 8, figs. 9, 12, 21. The same ware is common at Cerro de las Mesas.

pose of this discussion, only summary tables showing vertical distributions of the major wares are given. Detailed tabulations, covering distributions of subwares, vessel form, etc., are presented in the form of an appendix (Appendix A). The method used in the counts was simplified as much as possible. Sherds from a single level were segregated into subwares and counted. Indeterminable sherds were not counted, nor were the Unslipped Olla sherds (necks and rims were counted for form, but do not enter into the summary computations).[26] Two or more sherds that obviously joined were counted as one. Tabulations of figurine distributions will be given in somewhat more detail. The four stratigraphic trenches will be discussed in the following order: 13, 19, 26, and 1. Trench 1 is left for the last because, as was brought out in the descriptive section, the levels above the floor areas and paving were somewhat complicated by intrusive pits, so that the distributions must be checked against less disturbed sections.

TRENCH 13

Trench 13 was the cut on the First Terrace below the Ranchito ridges. As will be recalled, it yielded a comparatively undisturbed section. The major wares were distributed as shown in table 1.

TABLE 1.—*Depth distribution of major wares in trench 13*

Ware	Distribution at depth of (inches)—												Total number of sherds
	0-12		12-24		24-36		36-48		48-60		60+		
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent	
Polychrome	92	23	85	7	41	4	8	(1)	19	2	10	1	255
Brown	158	40	578	51	632	63	687	73	608	64	366	67	3,029
Black	137	35	465	41	320	31	235	25	320	33	167	31	1,644
Incensario	2	(1)	2	(1)	----	----	----	----	----	----	----	----	4
Comales	2	(1)	1	(1)	----	----	----	----	----	----	----	----	3
Total	391	98	1,131	99	993	98	930	98	947	99	543	99	4,935

[1] Occurrence under 1 percent.

The signal fact that the table brings out is the quantitative increase of Polychrome ware from bottom to top of the cut, which contrasts strongly with the decrease of the monochrome wares (Brown and Black combined). This trend of the Polychrome is irregular only in the 36- to 48-inch level (0.8 percent instead of 2 to 4 percent), but as the percentages of the other wares are also slightly irregular in the level this slight drop cannot be considered significant. Appar-

[26] This procedure does not, of course, alter the distributional trends of the main wares, but serves to bring them into higher relief in the percentage columns.

ently, the factor of sampling error affected this level more than any other. The sharp upswing in proportion of Polychrome ware in the 0- to 12-inch level is, as will be seen, duplicated in other trenches (although not in the same arbitrary stratigraphic unit). As regards the other major wares, if we discount the irregularity at 36 to 48 inches, we see a gradual decrease of the Brown ware from earlier to later horizons, while Black ware, after running fairly even, shows a sharp increase just prior to the marked increase of the Polychrome. Incensario ware and the Comales appear, though in small amounts, just before the upswing of the Polychrome.

Unslipped Ollas were present in all levels (see Appendix A). There was no well-defined pattern in the distribution of types of necks, save for the absence of the widely flaring type with thickened "rolled" rim. Occurrence of faces on olla necks is noted under figurine types. Raked olla-body sherds occurred in all levels.

Figurines and miscellaneous clay objects were distributed as shown in table 2.[27]

TABLE 2.—*Depth distribution of figurines and miscellaneous clay objects in trench 13*

Figurines and other clay objects	Distribution at depth of (inches)—					
	0–12	12–24	24–36	36–48	48–60	60+
Tres Zapotes hand-made figurines:						
Head types:						
A		1	4	3	1	
B		2		1		
C			(?) 1	2		
D	1	3	1			1
E						1
F						
Flat, modeled bodies	1	3	8	8	3	5
Angular; bifurcate feet		1		4		2
Tripod support						1
"Socket" on back			1	2		
Animal figurines		2	1	2		
Zoomorphic whistles		1		3		1
Total	[1] 2	13	16	25	4	11
Plain whistles		[2] 1	[2] 1			
Imported type (Central Veracruz?)	1					
San Marcos mold-made figurines						
Lirios modeled figurines						
Molded spindle whorls						
Perforated pottery disks		1				3
Imperforate pottery disks	1	1		1		
Cylindrical seals						1
Stemmed flat seals						
Punctate face on olla neck [3]		2	1		1	
Appliqué face on olla neck [3]		1				

[1] Includes one aberrant form.
[2] Two-tone whistles.
[3] All occurrences regardless of ware.

[27] See plates 31, 32. In this and the following tabulations of figurine distributions, hybrid forms of subtypes of the Tres Zapotes hand-made type have been assigned to that subgroup of which they had the most characters, rather than attempting to indicate all the various contributory subtypes.

The most striking feature of this tabulation is the frequency of the solid hand-made type of figurines (a total of 63) and the absence of the San Marcos mold-made and Lirios modeled types. These absences may be in part due to sampling error, for one fragmentary San Marcos figurine came from the nearby test pit (trench 8), but even allowing for such occurrences the relative frequencies of the types are significant. If we may judge by results from other trenches, the trench 8 specimen probably came from near the surface. Nor do molded spindle whorls and flat seals occur. Perforated and imperforate pottery disks have a sporadic incidence. One lone cylindrical seal was found in the deepest level. Mention should be made of a fragment of a beautiful stone mask (pl. 32, *v*) that came from the lowest level, in fact, from the pit dug into the sandstone base of the deposit (cf. p. 20).

As for the various subtypes of solid figurines, little enough can be said. They seem to be distributed quite sporadically. This may be because of the limited numbers of the various subtypes in any one level.

TRENCH 19

It will be recalled that the profile of trench 19 showed a slight change in soil composition at a depth of 45 to 48 inches (p. 23). At this point patches of sand occurred, and the mix below was noticeably more sandy than that above. The table of ware frequencies (table 3) shows no major breaks such as might be attributed to an unconformity, thus substantiating the view that the change was due to normal soil processes. The accentuations in the trends parallel very closely those noted between the two uppermost foot levels in trench 13, at which point there was not the slightest hint of a change in the soil matrix of the sherds.

TABLE 3.—*Depth distribution of major wares in trench 19*

Ware	Distribution at depth of (inches)—																Total number of sherds
	0–12		12–24		24–36		36–48		48–60		60–72		72–84		84+		
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
Polychrome	368	49	201	44	102	34	67	30	34	5	8	(1)	8	(1)	----	----	788
Brown	242	32	164	35	104	34	98	43	338	55	552	65	693	68	673	72	2,864
Black	83	11	51	11	83	27	54	24	229	37	283	33	303	30	258	27	1,344
Incensario	51	6	26	5	10	3	2	(1)	1	(1)	2	(1)	1	(1)	----	----	93
Comales	6	(1)	10	2	----	----	2	(1)	3	(1)	----	----	----	----	----	----	21
Total	750	----	452	----	299	----	223	----	605	----	845	----	1,005	----	931	----	5,110

[1] Occurrence under 1 percent.

All in all, the ware distributions in the two trenches are remarkably similar. The major trends—the increase in quantity of Polychrome and decline of the monochromes—are identical. In trench 19 they have proceeded farther, however. The quantitative increase in Black ware (more gradual in trench 19 than in 13), just preceding the strong rise of Polychrome, too nearly duplicates the trench 13 distribution to be accidental, especially with the associated appearance of the Comales in both trenches. It seems logical to consider the level at which these changes occur a correlation point for the two cuts. That is to say, the 12-inch level in trench 13 must have been contemporary with the 48-inch level in trench 19. I do not mean, naturally, that these points, designated arbitrarily according to our metric system, represent a particular day or year. I do believe that the two manifestations of ceramic change represent the same general phase or period in the evolution of the local wares. Using this easily recognized period as a guide, we then may compare the entire deposits in the two sections temporally. Of course, a foot of deposit at one part of a site does not necessarily represent the same time span as does an equally thick layer somewhere else. In this case, however, there is a corroborating fact. Not only is our correlation point more deeply buried in trench 19, but there is an unbroken continuation of the trends to more extreme relative frequencies, indicating that the upper levels of trench 19 are the later of the two. Similarly in the case of the two sets of lower levels, not only the slightly lesser depth of the trench 19 deposit below the correlation point but also the more gradual increase in amount of Black ware in the lower levels and the relatively deeper occurrence of Incensario ware, suggest somewhat later beginnings. It must be taken into consideration, of course, that trench 19 was dug a short way up on the side hill, and its deepest levels are probably not the earliest of the New Lands locality.

The distribution of Unslipped Olla forms, as in the preceding case, showed little clustering of types, save for the flaring necks with thickened rolled rims which were found only in the upper 3-foot levels (see Appendix A). Raked body sherds were present in all levels. Three samples counted showed them to comprise 29, 31, and 34 percent of the combined totals (determinable slipped sherds plus raked olla sherds) of their respective levels. Inspection indicates that this range represents the normal proportion of the raked sherds from all levels in the Tres Zapotes trenches.

Figurine distribution (table 4) from trench 19 shows a number of significant facts (see pls. 33 and 34).

TABLE 4.—*Depth distribution of figurines and other clay objects in trench 19*

Figurines and other clay objects	Distribution at depth of (inches)—							
	0–12	12–24	24–36	36–48	48–60	60–72	72–84	84+
Tres Zapotes hand-made figurines:								
Head types:								
A	[1] 2	3		1	5	[1] 1	[1] 1	(?)6
B		1				(?)1	1	[1] 2
C	2	1		1	(?)1			(?)2
D								
E				1		2		
F		1						
Flat, modeled bodies	3	1	1	2	4	7	2	4
Angular; bifurcate feet	1				2	2	1	(?)2
Tripod						1		
Socket								1
Animal forms	2	3		1	2	1		[1] 2
Zoomorphic whistles					1		(?)1	
Total	10	10	1	6	15	15	6	19
Plain whistles					1			
San Marcos mold-made type	[2] 4	1		[3] 1				
Lirios modeled type		(?)1						
Mold-made spindle whorls		1						
Pottery disks:								
Perforated		1	1		2	1		
Imperforate							2	
Stemmed flat seals								1
Cylindrical seals								
Punctate face on olla neck [4]						4	6	4
Slit face on olla neck	1							

[1] Includes 1 aberrant form.
[2] Includes 1 mold (pl. 33).
[3] Figurine on pot lid (pl. 33).
[4] All wares combined.

First of all, the trench 19 material shows more clearly than that from 13 differential distribution of the solid hand-made and mold-made types of figurines. While the former occurred throughout the deposit, the mold-made forms were confined quite definitely to the upper levels—those in which Polychrome ware was numerically dominant. The lone example of mold-made spindle whorls likewise comes from an upper level. Punctate faces on olla necks were restricted to the deeper horizons. Unfortunately, no figurines of the "Lirios type" were recovered from the trench, except for one doubtfully identified fragment from the 12- to 24-inch level.

TRENCH 26

The sherd-bearing deposit from below the ash layer near the Burnt Mounds Group provides the best undisturbed body of material available from Tres Zapotes. There is no possibility of intrusion of later remains; the consolidated cap precludes that. Thus we have an isolated horizon which by virtue of its position below certain mounds in the valley plain must be relatively early.

It should be made clear that the identification of Polychrome sherds below the volcanic ash (a total of nine were so classed) is

doubtful. These specimens were so heavily eroded that neither slip nor paint remained, and no distinctive Polychrome forms occurred among them. All there was to identify them by was their finely divided orange to buff paste without visible tempering, so characteristic of later Polychrome ware and unlike that of the Brown and Black ware. In the trenches just discussed, very small amounts of Polychrome sherds (some nearly as poorly preserved as the sub-ash ones) appeared even in the deep levels. It is quite possible that the trench 26 specimens were not Polychrome at all, but merely aberrant specimens of one or the other of the monochrome wares.

The major wares and the figurines and miscellaneous clay objects were distributed as shown in tables 5 and 6, respectively.

TABLE 5.—*Depth distribution of major wares in trench 26*

Ware	Distribution at depth of (inches)—														Total number of sherds
	189–201		201–213		213–225		225–237		237–249		249–261		261+		
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent	
Polychrome	3?	2	-----	-----	-----	-----	1?	(1)	5?	1	-----	-----	-----	-----	9
Brown	99	66	79	66	165	66	127	73	191	59	181	61	66	[2] 84	908
Black	46	31	40	33	84	33	45	26	126	39	112	38	12	[2] 15	465
Total	148	-----	119	-----	249	-----	173	-----	322	-----	293	-----	78	-----	1,382

[1] Occurrence under 1 percent.
[2] The relative values of the wares in this level is probably slightly askew owing to the smallness of the sample. If the sherds are grouped with those of the overlying level, we find 66 percent Brown and 35 percent Black for the combined levels, figures more in keeping with those of the other layers.

The absence of Incensario ware and Comales, and the minute amount of Polychrome (if all the eroded sherds are admitted, only 0.6 of the total) are immediately noticeable. Quite obviously, the ceramic complex represented is of the pure monochrome variety indicated as early at the site by the lower levels of the trenches previously discussed. The entire trench 26 deposit probably must be reckoned antecedent to those of trenches 13 and 19. The logical inference is that, after the ash fall, the inhabitants moved to the higher ground along the edges of the plateau, which was being denuded of the ashy muck. Theoretically, it is possible that the deposits of the old plain and those of the higher slopes might overlap slightly. However, as shall be brought out, differences of the figurine patterns indicate that they do not, and that, if anything, we may have a slight gap between the sub-ash horizon and the earliest layers tapped on the terraces and slopes. Yet the general continuity of the ceramic patterns shows that such an unconformity, if indeed it occurred, was of little importance in the cultural history of the site.

The figurine pattern of the trench 26 deposit was a rigid one. None but Tres Zapotes hand-made figurines were found there, and only two subtypes of this group. Other subtypes were completely absent, except for a fragment of a miniature effigy vessel with a subtype E ("baby-face"), as were the San Marcos mold-made and Lirios types. (See pls. 35 and 36.)

TABLE 6.—*Depth distribution of figurines and miscellaneous clay objects in trench 26*

Figurines and other clay objects	Distribution at depth of (inches)—						
	189–201	201–213	213–225	225–237	237–249	249–261	261+
Tres Zapotes hand-made figurines:							
Head types:							
A	2		1	[1] 2(?)	6	[2] 2	
C	1	1	1	2	3	1	
E						[3] 1	
Flat modeled bodies	1		2	4	6	5	
Animal figurines					1	1	
Whistles, zoomorphic					2		
Total	[4] 4	1	[5] 4	8	18	10	
Pottery disks:							
Perforated			1				
Imperforate			1		1		
Punctate faces on olla necks [6]			2	[7] 1(?)	1		

[1] One fragmentary specimen; subtype A or C, included.
[2] Includes 1 slightly aberrant specimen; 1 head attached to vessel wall.
[3] Effigy vessel, Black ware.
[4] A pottery cylinder with a longitudinal perforation (bead?) and a fragmentary rectangular vessel made of the same clay as the figurines, came from this level.
[5] A small zoomorphic lug in Black ware came from this level also.
[6] All wares combined.
[7] Fragmentary; identification probable but not certain.

The total picture presented by the material from beneath the ash layer is that of a pure and integrated ceramic complex. The wares (it must be mentioned that Unslipped Ollas, with both plain and complex necks, and raked sides, occurred in all levels) are limited in variety and the two important ones, Brown and Black, show numerous points of relationship in vessel form. The same is true of figurine types; the A and C subtypes are the most closely related of all the solid type. It will be worth while to pause for a moment to sum up the main features of this pure and demonstrably early ceramic complex, in order to be able to recognize early traits which have persisted into later horizons.

The predominantly monochrome aspect of the complex has been mentioned; esthetic effect was achieved through form, particularly by elaborate vessel silhouettes rather than color. A very small amount of painted ware may have been made, however, if the few "Polychrome" sherds are correctly identified. Feet, legs, and lugs are virtually absent (one fragment of a cascabel leg in Black ware was found in the 249- to 261-inch level); handles completely so. Very

heavy annular bases, thick-rimmed jars, unsupported spouts, flaring-side bowls with everted grooved rims, punctate faces on olla necks, are all early elements. As for subwares, both Red-slipped and White-slipped sherds occur in small quantities, as do the White and Brown-rimmed forms of Black ware. The related punctate figurine subtypes A and C are early, and associated with the flat modeled type of bodies. Subtype E figurines occur also. The more varied subtypes of other trenches, and the San Marcos and Lirios types are lacking. So are the mold-made spindle whorls. Seals are either absent or very rare.

TRENCH 1

Sherd counts of the trench 1 material show that the disturbances above the floors and sandstone paving at 47 and 56 inches affected the distributions rather less than might have been expected. The wares below these points are quite regular in numerical proportions.[28]

The distribution of major wares and of figurines and miscellaneous clay objects is shown in tables 7 and 8, respectively.

TABLE 7.—*Depth distribution of major wares in trench 1*

Ware	Distribution at depth of (inches)—											
	0–12		12–18		18–24		24–30		30–36		36–42+	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent
Polychrome	674	67	284	60	824	59	418	40	178	33	185	29
Brown	226	22	127	27	314	22	361	34	193	36	256	41
Black	63	6	49	10	177	12	220	21	147	27	161	26
Incensario	18	1	7	1	25	1	9	(1)	8	1	8	1
Comales	19	1	2	(1)	47	3	36	3	9	1	9	1
Total	1,000	------	469	------	1,387	------	1,044	------	535	------	619	------

Ware	Distribution at depth of (inches)—												Total number of sherds
	42–48		48–54		54–60		60–66		66–72		72+		
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent	
Polychrome	97	13	143	15	22	3	12	1	5	1	7	(1)	2,849
Brown	344	49	454	48	384	65	815	71	362	75	688	72	4,524
Black	244	34	329	35	179	30	313	27	111	23	254	26	2,247
Incensario	12	1	11	1	2	(1)	------	------	------	------	------	------	100
Comales	4	(1)	3	(1)	------	------	------	------	------	------	------	------	129
Total	701	------	940	------	587	------	1,140	------	478	------	949	------	9,849

[1] Occurrence under 1 percent.

[28] A small lot of sherds from an undisturbed floor area in the east half of the trench at a depth of 52 inches consisted of the following: 22 Brown ware (including 1 olla with punctate face, 1 Red-slipped olla); 9 Black ware, 1 Unslipped Olla neck, and a number of raked body sherds.

In considering the trench 1 data, we are in the happy situation of having only to account for the normalcy of the ware-distribution curves, rather than, as sometimes happens, having to explain away irregularities of occurrence. It is quite evident that the trends of the several wares differ but slightly from those of trenches 13 and 19, particularly the latter, despite the apparently extensive disturbances in the upper portion of the deposit. The reason for this may be found in the sherd frequency in the mix. Each 6-inch level contained 150 cubic feet of mix, and an average of 754.5 sherds (counting the 0- to 12-inch level as two, and assuming that the 72+-inch level was about equal to the rest), or 5 per cubic foot. An intrusive pit 3 feet in diameter, containing 3.5 cubic feet of mix, would normally contain but 15 or 20 sherds, 2.7 percent of the level total; one 4 feet across, about 30, or 4 percent. (Pits for the burials were even smaller.) Since these small quantities of intrusive sherds are not from completely different ceramic complexes but come from levels containing the identical wares (though in different proportions), the

TABLE 8.—*Depth distribution of figurines and miscellaneous clay objects in trench 1*

Figurines and other clay objects	Distribution at depth of (inches)—											
	0–12	12–18	18–24	24–30	30–36	36–42	42–48	48–54	54–60	60–66	66–72	72+
Tres Zapotes hand-made figurines:												
Head types:												
A	4		2	1?		1	1	2	3	[1] 9	3	6
B	1	1	1?		1			1				
C		3	1?				1					
D	1		1							2		
E								1				
F									1			
Flat modeled bodies	3		3			3	3	3	3	4	3	7
Angular; bifurcate feet			1		1					1		
Tripod												
Socket												
Animal forms		1	1	2		1			1		2	
Zoomorphic whistles		2								1	1	3
Total	9	7	10	3	2	5	5	7	8	17	9	16
San Marcos mold-made figurines	4	[2] 2	7	6	1?							
Lirios hollow hand-made		1		1	1	1?	1	2	[3] 1			
Mold-made spindle whorls	1	1										
Pottery disks:												
Perforated	1					2		1				
Imperforate												
Stemmed flat seals			1									1
Punctate face on olla neck	1		2?		1?	1?		[4] 2	6	5	3	1
Stamped circle on olla neck					1							
Appliqué face on olla neck							[5] 1?					
Vertical zoomorphic lugs			1	1?								

[1] Includes 2 bearded punctate specimens.
[2] Includes 1 ocarina.
[3] From bottom pitfall of intrusive pit (see p. 16).
[4] Includes 1 face on olla body just below neck.
[5] Large modeled (not punctate) ear on neck fragment.

net difference produced by such a pit becomes slight indeed. The case would be different, of course, if the materials were from several superimposed cultures instead of a continuum of the same one.

In comparing the distributions to those of other sections, we note that not only are the general trends alike, but that the correlation point—marked by a heavy increase in Polychrome ware preceded by a slight peak in Black ware—appears in the trench 1 material at the 36- to 42-inch level. This makes it possible to tie this trench in with the rest in the same fashion that we correlated trenches 13 and 19.

The figurine distributions from trench 1 in general correspond to the patterns demonstrated in other trenches. Of course, the few misplaced specimens (from intrusive pits and the like) stand out more than in the case of sherds, because of the smaller sampling of objects of the former class. (See pls. 28–30.)

The usual incidence of figurines of the solid hand-made type in all levels is repeated here as in other trenches. Mold-made figurines come from upper levels only. Fragments of Lirios-type specimens are a little more scattered, but chiefly late; the piece of deepest provenience was observed to come from an intrusive pit, and some others may have as well. As will be demonstrated further on, the associations of this type are unmistakably with late wares and figurine types. Mold-made spindle whorls are late. The two examples of vertical zoomorphic lugs come from the upper portion of the cut, while punctate faces on olla necks have their greatest frequency in the lower levels.

SUMMARY

The material from the stratigraphic trenches brings out a number of salient facts. First of all, the persistence of certain wares and types of figurines from the deepest to the uppermost levels very clearly demonstrates that the Tres Zapotes deposits[29] contain remains of a single culture, whose human bearers occupied the site over a period of time. The various changes that occur—innovations, changes in ware frequencies (representing changes in interest)—are of the order that we would expect as the effect of diffusion from other culture centers, and evolution of old and introduced patterns. There is no evidence of populational shifts and introduction *in toto* of new cultural constellations. If such drastic events occurred they made no impression on the ceramic record. Most of the evidence at hand speaks for a ceramic, and, inferentially, a cultural, continuum. For this reason it seems best to designate the subdivisions of Tres Zapotes ceramic history as "phases" rather than "periods," to empha-

[29] By definition "Tres Zapotes deposits" excludes the late intrusive Soncautla horizon.

size the processual nature of the changes and to avoid any connotation of succession of different cultures.

When we correlate the four stratitests on the basis of comparative ware and figurine distributions, as suggested in the paragraphs relating to the individual trenches, we find the following situation. Trenches 13, 19, and 1 overlap to a considerable extent. In all three the correlation point—the sharp increase of Polychrome ware immediately preceded by a slight peak in Black ware frequency—appears. Trench 26, the pure isolated deposit, stands apart. The relationships may be represented graphically (fig. 44).[30]

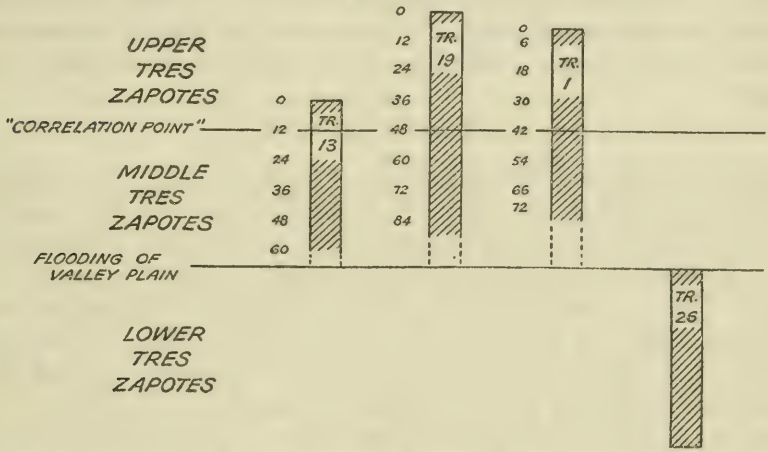

FIGURE 44.—Correlation of four stratitests on basis of comparative ware and figurine distribution.

The correlation point serves to mark off two phases in the ceramic history of the site. The upper is that characterized chiefly by the predominance of Polychrome ware and occurrence of mold-made figurines. This we may designate the Tres Zapotes Upper phase. Prior to the Upper was the phase represented by the bottom levels in the three trenches. This Middle phase was a manifestation transitional typologically as well as in its stratigraphic position, containing as it did numerous carry-overs from the Lower phase represented by the trench 26 material as well as the low but consistent amounts of the Polychrome ware whose efflorescence marks the beginning of the Upper phase. The sharpness of the change from Lower to Middle is probably exaggerated by the hiatus between the trench 26 deposit and the deposits of other trenches. The

[30] In figure 44 the vertical dimensions of the trenches are indicated to suggest the extent of contemporaneity. While metric units of deposit can be assigned no absolute temporal value, they undoubtedly have relative significance. Thus, that the masses of deposit overlying the correlation point in trenches 19 and 1 are so much thicker than in trench 13 must mean that those localities were occupied longer after the change in emphasis in ware type.

greater variety of subtypes of Tres Zapotes hand-made figurines in the Middle phase definitely points to local elaboration and modification of Lower patterns. The frequency of Polychrome ware is another critical trait. If this ware actually was present in the Lower phase, which is not certain, it occurred in much smaller quantity than in Middle deposits.

Detailed characterizations of the three phases can be given with more assurance after we have checked the stratigraphic results by means of ware associations in several cache lots of material. For the moment, it will suffice to reiterate the major result of the stratigraphic investigations: the determination of a ceramic continuum in the Tres Zapotes deposits, which as a result of normal processes of culture growth is subdivided into three phases: Lower, Middle, and Upper.

WARE ASSOCIATIONS

Several cache and burial lots of restorable vessels and figurines were encountered in the course of the excavations. In the instances where the origin point of the pit in which the objects were deposited could be defined, the lots furnish invaluable data for a stratigraphic study. Even where the precise level to which the objects properly belonged could not be determined, however, the demonstrated contemporaneity of particular wares and/or figurine types is useful. For this reason a number of such groups of associated materials will be described in detail. Most of them have been mentioned briefly in the description of trenches.

TRENCH 10 GRAVE LOT

As was stated in the general description of trench 10, this particular cut was made for the specific purpose of checking the stratigraphic relationship of a ceramic complex which Stirling believed, on the basis of 1939 field observation, to be intrusive.[31] This attempt was only modestly rewarded, for but one such body of material was found. Fortunately, there were an unusually large number of vessels in the lot, nine in all, and the group was situated in such a way as to make its intrusive nature absolutely unmistakable. It will be recalled that the deposit at this point had a humus-stained clayey surface layer 10 to 13 inches thick overlying the brown clayey mix. In the area of the grave lot the black soil had a thickness of 11 inches. One small vessel was found inverted at a depth of 10 inches, and at this point the black soil continued downward over a roughly circular

[31] Weiant was unable to isolate this material as a distinct complex in his analysis of the 1939 ceramics. This constitutes the major point of difference between his results and the present ones. I shall demonstrate in the following paragraphs that there was an unconformable ceramic horizon at the Tres Zapotes site, which had no genetic connection to the Upper Tres Zapotes horizon into which it intrudes.

area 1 foot 2 to 4 inches across. The margin of the black pitfall was sharply outlined against the brown mix. The bottom of the intrusive pit lay 20 inches below the black and brown contact, a total of 31 inches below the surface. Just above the bottom of the pit was a mass of small pottery vessels and other objects, and some infant bones and teeth (pl. 9, fig. 2; the edge of the black pitfall shows just to the left of the vessels). Checking with 1939 notes showed that while most of the intrusive pits contained cremated human remains, several infant burials deposited in such pits were not burned. The wares associated with this burial are of the same type as those said to have accompanied cremated bones.

To preface the description of the vessels found with this and other (1939) intrusive burials, it seems proper to remark that the wares are completely different from those integrally associated with the Tres Zapotes deposits. In no case do we find a shape-slip-paste combination which would fit into any of the Tres Zapotes ware categories. Decoration, too, where it can be determined, is of a different genre.

Five of the vessels have remnants of a warm light-tan slip (15″*d*, light pinkish cinnamon, to 17″*d*, pinkish buff). The original surface may have been slightly darker, to judge by a well-preserved example from the 1939 collections. Of the shapes, only one is even vaguely familiar; this is an incomplete (probably unsupported spout) spouted vessel (pl. 23, *j*). The sides do not turn in sharply enough to make the form identical to the Brown ware spouted vessels. Unfortunately, neck and rim are missing. The other shapes are completely non-Tres Zapotes. One is a small compound vessel with two compartments and a strap handle across the middle, something like a modern bonbon dish (pl. 23, *f*). A wide-mouthed cooking vessel has a rounded base, very slightly inturned sides, and an irregular flaring rim (pl. 23, *i*). Two horizontal strap handles are set on the sides. The outside is dark from smoke blackening but the interior shows traces of the tan slip. The other two are miniature forms; a round-bodied long-necked olla with three heavy vertical handles or perforated lugs on the sides (pl. 23, *b*), and a round-bodied necked pitcher which, though incomplete, has the remnants of a vertical strap handle from body to rim on one side and a lip on the other (pl. 23, *a*). The three-handled form retains traces of a design in black, with fine-line hachure.

A second spouted vessel in the lot is shaped for all the world like a common modern teapot, even to the inner flange below the rim to support the lid (pl. 23, *e*). The slip is a heavy cream white, very similar to that used on the white-slipped variant of Tres Zapotes Brown ware. The shape obviously differs, however.

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The widespread "shoe," or "duck olla," shape is represented by a small, possibly a miniature vessel in the group (pl. 23, *k*). A strap handle is set from rim to neck on the side away from the elongate body. The slip, or at least what remains of it, is dark brown.

The paste used in all the foregoing is reddish brown, with heavy sand tempering, very much like that of Tres Zapotes Brown ware. The vessels, particularly the smaller ones, appear somewhat rough in finish.

Three small bowls are of a shape that is reminiscent of certain Tres Zapotes Early Transitional forms. They differ, however, in slip and paste. They are all variants of the small composite silhouette "dish" type (pl. 23, *g*, *h*). One is of a very fine chalky pinkish buff clay. Traces of slip which remain are tan. This vessel was probably decorated, like a 1939 Cremation Burial specimen of the same paste and shape, with a complex design in shallow fine incising. Another composite silhouette specimen has wide parallel encircling grooves. It is of fine light-brown paste and had a dark-brown slip. The third, the one found inverted in the upper part of the pit, has a dark chocolate-brown slip and is of the same form as the preceding.

Two figurines with the burial were of a type unique at the site (pl. 23, *c*, *d*). Both are cylindrical, hand-made, and of coarse paste. Both represent females, presumably of the human species although the resemblance is not great. The heads are inverted triangles. That of the smaller has a central notch on top; that of the larger has a battered worn edge along the top so that its original outline is indeterminable. Eyes and mouth are simple horizontal slits, the nose a lump projecting from between the eyes. Arms, breasts, and, in the case of one, feet are very crudely portrayed. The larger had a coat of red paint over a dull grayish-brown wash. The smaller has a coat of light-tan slip like that of the first five vessels described.

Two asphalt-covered spindle whorls also were among the grave goods. One is quite flat, with a conventionalized monkey in low relief. The other has a central peak representing an animal's snout, with a pair of shallow dimples on either side to represent eyes.

A fragmentary subtype C Tres Zapotes hand-made figurine, asphalt-painted, also was found in the pit, but not definitely associated with the other materials. It undoubtedly does not belong with them, but was mixed in with the pitfall.

A number of whole vessels from cremation burials recovered in 1939 are worth reproducing, although Weiant has described them. The cover of one small roughly made olla containing calcined bone fragments is a small open curved-side bowl (pl. 23, *g*). It is made of a fine brown paste, chalky in texture, and formerly had a dark brown slip. Nearly all that remains of the slip is that which filled

in a shallowly incised design. The pattern is extremely intricate, and in its present state, it is difficult to make much out of it (fig. 45). It is quite unlike any Tres Zapotes pottery design yet discovered. Another vessel is a small composite silhouette bowl (pl. 23, *l*). The

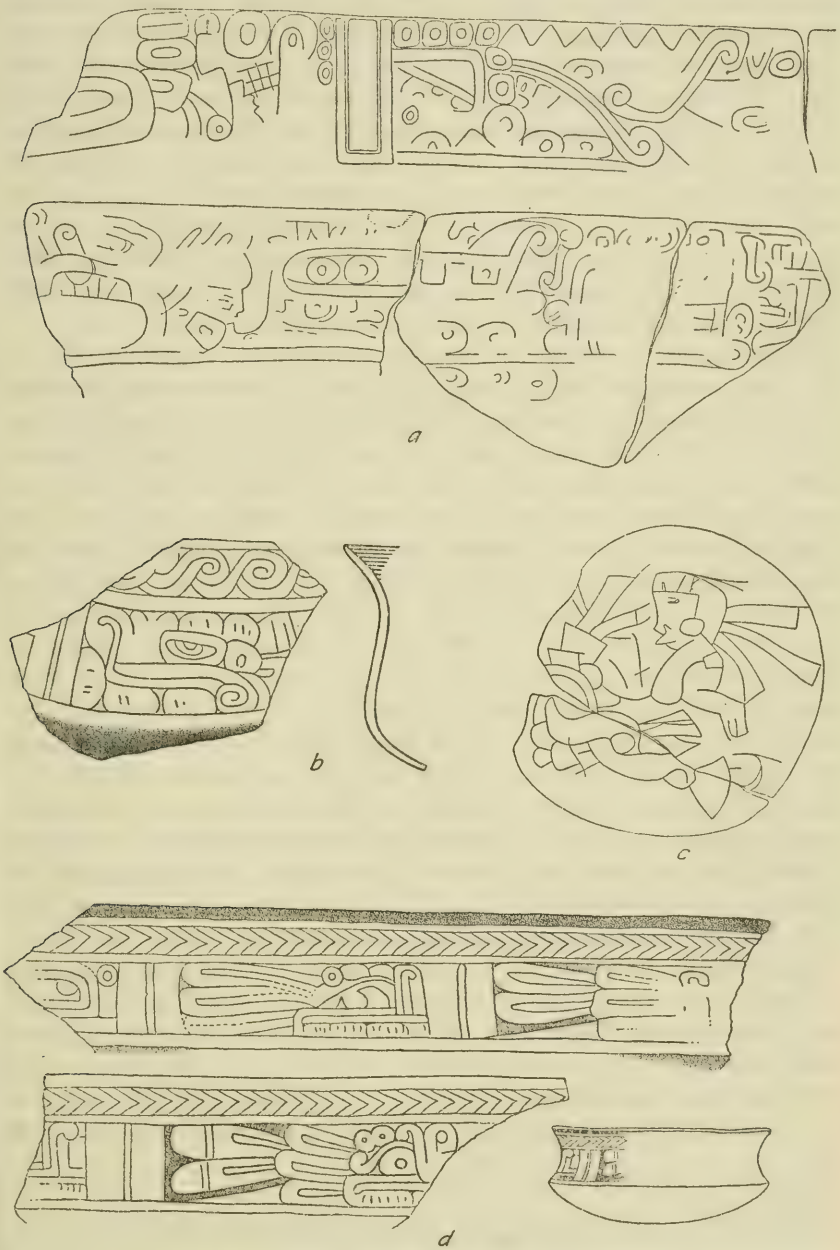

FIGURE 45.—Fine-line incised bowls, Soncautla complex.

paste is fine-grained, buff in color. The outside had a tan wash, into which the design was incised, then a chocolate-brown slip. The elaborate design seems to consist of a series of plumed serpent heads (fig. 45, *d*). Another vessel reportedly associated with a cremation burial is the "chile grinder" shown in plate 24, *a*.[32] The body of the vessel is wider but otherwise the same in silhouette as the cooking pot with horizontal strap handles from the 1940 intrusive grave lot. The bottom of the inside of the vessel is heavily scored with short parallel and long zigzaz lines, presumably for grinding purposes. The scoring was done after the slip had been applied, but before firing. Three broad loop legs support the vessel. The outside, the rim, and the inner wall have painted decoration in red and black, on the tan slip. The design consists mostly of horizontal parallel lines enclosing zigzag lines in red, with fine-line hachure in black. The heavier of the red lines are bordered with black.

We may sum up the evidence relating to the intrusive burials and the wares associated with them. First of all, the manner in which the 1940 burial lot occurred plainly shows that it was not contemporaneous with the other materials in the Tres Zapotes deposits, but was intruded into the deposits after a lapse of time. While the amount of time intervening between this horizon and the Tres Zapotes materials proper cannot be reduced to a precise figure, we must admit a sufficient interval to allow for the intrusion of humus material, i. e., reforestation of the locality, between the two culture horizons. The stratigraphic unconformity is duplicated in the nature of the wares. Whereas the Tres Zapotes ceramic column gives every indication of representing a continuum from Lower to Upper times, with the evolutions of the main wares traceable throughout the deposits, the wares associated with the cremation burials represent a complete break with local ceramic traditions.[33] Even our small sampling displays a host of new ceramic elements: Globular spouted vessels, compound vessels, "shoe form" pots, strap handles, pitchers, ollas with three handles, loop legs, "chile grinders," new slip colors, fine-line painted decoration with hachure and black-bordered lines, fine-line incising of elaborate representative patterns. It must be significant that a number of these forms—handled pitchers, three-handled ollas, and handled shoe-form pots, several specimens of which contained burned human bone—were found associated at Soncautla, near Jalapa.[34] This very specific linkage has provided the warrant for naming the Tres Zapotes manifestation of the com-

[32] Cataloged as coming from burial R–1, listed by Weiant (1943, p. 139) as a "Surface (Cremation) Burial."

[33] The custom of cremation itself represents a departure from Tres Zapotes patterns.

[34] Strebel, 1885–89, vol. 2, p. 88, and pl. 22, figs. 2, 9, 12–15, 17–18. Chile grinders are also common in this general central and west-central Veracruz region (op. cit., passim).

plex. The figurines, if the two from the 1940 lot are typical, are completely unlike any Tres Zapotes type. The spindle whorls likewise seem to differ from earlier stratigraphically placed forms, but our sampling of these objects is too small for complete certainty. It is interesting to note that what ceramic likenesses occur are chiefly with Lower rather than with Upper types—small composite silhouette dish shapes, unsupported spouts. Such similarities can have little significance other than that of suggesting that these traits were widespread in early times in the area. In brief, all the evidence points to the propriety of dealing with the Soncautla complex as representing a culture completely distinct from that of the Tres Zapotes deposits and unconformably later.

Weiant's inability to differentiate between this highly distinctive complex and the Tres Zapotes remains into which it was intruded undoubtedly results from his failure to distinguish between the burial vessels and the older sherds, etc., included in the pitfall. Perusal of his (incomplete) list of burial associations, however, shows that the *complete* vessels all or nearly all fall into the categories described in the present paper as components of the Soncautla complex.

It is of especial interest to note that the two vessels identified in the present paper as Cerro Montoso trade pieces (pp. 89, 90) came from cremation burials (Weiant, 1943, p. 139, R–14, R–16). This is a point of significance in dating the horizon, as Cerro Montoso is generally assumed to have been quite late.

TRENCH 4 CACHE

The richest cache lot in trench 4 has been mentioned in the account of that trench. A circular pit 46 inches across was encountered at a depth of about 30 inches below the surface of the ridge (64 inches below the mound surface at that point). Although the mound base was not well-marked, the point of origin of the pit seemed to lie below it. The pitfall was quite distinctive—strongly reddish brown in color, owing to quantities of burned earth. This mixture continued for 14 inches (to 78 inches below mound surface). In this mix were seven complete and restorable vessels. Three of these are of particular interest because of their hybrid type; they combine what are properly Lower-Middle shapes and pastes with Upper slip and painted decoration (pls. 18, *e*; 15, *j*, *k*). All three are of a paste which in its coarse texture and reddish-brown color belongs to the Brown ware group. One is a short stubby jar with strongly concave sides, another a composite silhouette tetrapod bowl with everted rim and small solid truncated-conical feet (the only tetrapod vessel recovered from the site, incidentally), the third, a flat-bottomed dish with in-leaned walls. These shapes, with the probable exception of the tetrapod supports

of the bowl, all definitely pertain to the Brown ware tradition dominant in Lower and Middle times. All three vessels, however, have buff slips identical to that distinguishing one variety of Polychrome ware, and painted geometric designs, done in the typical bold technique of Polychrome ware, in black or red and black. The accompanying vessels were three normal Brown ware forms, a small dish (pl. 17, *h*), a White-slipped dish (pl. 19, *i*), and a plain-neck olla; and a Black ware bowl which departed from the norm in having a white base instead of a white rim, as though it had been fired wrong side up (pl. 21, *d*). No true Polychrome vessels occurred in the cache, but several sherds of this ware came from the pitfall.

The shallow location of the cache, even given only a rough correlation of trench 4 and trench 1 horizons, indicates that this lot of material is assignable to the Upper phase, although it was cached prior to the construction of the little mound. Finds of a few fragments of what appear to be the same hybrid cross as the trench 4 specimens in the Upper horizon of trench 10, and a few sherds of the same general order in the Upper material in trench 23, corroborate this dating.

TRENCH 20 "CACHE"

The material from trench 20 can be dealt with most suitably as a cache lot. The most of the figurines, as has been stated, occurred in a "pocket" not over 3 feet across, and the rest of the material, filling the little gully down the side of the sandstone reef, can scarcely represent a long period of deposition. If the whole body of ceramics—figurines and potsherds—is not a cycle-ending dump or something of the sort, it must represent sweepings from a shrine or temple disposed of over a brief space.

The figurines from this trench formed the basis for the typological description of "Lirios modeled figurines." It is necessary to choose between such a generalized account with figures (pls. 55 to 63) and a wearisome piece by piece description. The important point is that stylistically and in technique, and to a great extent in subject, the figurines from the concentration and from the rest of the gully-fill represent a single phase of an artistic tradition. The wares mixed in with the figurines and those of the gully-fill surrounding them may be checked against the stratigraphically determined ceramic column to give an approximate placing of the figurine type. Some of the most striking aspects of the relationships are based on associations—the occurrence of San Marcos mold-made figurines and figurines of the San Marcos tradition done in Lirios technique and clay (pl. 62, *f*, *g*, *h*) have been mentioned.

A tabulation of wares, based on selected rim sherds, is no less illuminating.

Wares present:

Polychrome ware.—Cream-white slip: Flaring-side bowls, flaring rim, flat everted rim; sharply inturned side bowls, heavy rim; supported-spout vessel; miniature ollas; cascabel legs. Buff slip: Curved-side bowl; cascabel legs. Gray slip: Flaring-side bowls, flaring rim, flat everted rim; sharply inturned side bowls, heavy rim; thin curved-side tripod bowls; cascabel legs.

Brown ware.—(Very few sherds.) Flaring-side bowls with unslipped base.

Black ware.—(Very few sherds.) Flaring-side white-rimmed bowl.

Incensario ware.—Three-handled form; annular-based form; bossed sides (also covers with figurine-head ornaments).

Comales.—(Few sherds only.)

Figurines.—(Other than Lirios type.) Tres Zapotes hand-made (2 subtype A); San Marcos mold-made type (see pl. 62, *f*, *g*, *h*).

The significant feature of the presence-absence tabulation of wares is the great number of Late Tres Zapotes elements represented, and the paucity of Lower-Middle ones. (No Soncautla complex traits at all are present.) From this we must infer that the large hand-made ("Lirios") complex was contemporaneous with the Upper phase of Tres Zapotes ceramics. Whether the art style so manifested was completely coterminous, or whether it represented but a short period within the Upper phase cannot be determined on the basis of the present evidence. The occasional incidence of fragments of this type of figurine in Upper horizons in various parts of the site (trenches 1, 19, 24) suggests a rough coterminality.[35] One is hard put to explain the coexistence of two such art styles as those expressed in the Lirios and the San Marcos types of figurines. It is tempting to think of the former as a manifestation of a particular cult. The many representations of an old, often bearded, male among the figurine heads might well be images of a patron deity.

TRENCH 23 CACHE

Trench 23, a section into one of the larger of the mounds of the Burnt Mounds Group (see p. 8) disclosed a quite remarkable cache of pottery vessels and figurines. The objects were encountered about 15 feet in from the east edge of the mound at a depth of 6 feet. They were thus slightly below the level of the plain, but still within the partly buried mound mass. Unfortunately, it was not possible to define a point of origin of the cache, so that it is impossible to say whether its contents were placed during the building of the mound or had been intruded into the completed structure. The lot consisted of 33 complete and fragmentary figurines and 12 perforated pottery

[35] A few figurines of this type have been recovered from the Upper phase site of San Marcos.

disks lying in a jumbled heap and neatly covered by 19 inverted dishes and bowls (pl. 9, fig. 1). A foot to the north, on the same level, lay a skull without a mandible (a trophy head?). It was not clear whether the skull really belonged with the cache or was fortuitously associated.

There are a number of extraordinary features about the material from this cache. One is the rather aberrant nature of the vessels—chiefly in their unusual roughness of finish—and another is the remarkable variation of the figurine types. The vessels are dishes and small bowls, most of which are familiar Upper phase types, although some are on the aberrant side.

Most of the pieces (so far as they can be identified) belong to the Polychrome class. The largest is a flat-based, flaring-side bowl with a flat everted rim (pl. 13, *a*). It seems to have been meant to have a Cream-white slip, but, perhaps because thinly applied, the slip is darker than ordinary. There is no painted decoration. This vessel, like several others from the cache, gives the impression of having been carelessly or very hurriedly made, quite unlike normal examples of this ware (or for that matter, of the other important Tres Zapotes wares). The shape is not quite round, the wall lopsided and uneven in height, the rim varying in amount of flare. Even the bottom is not flat. In fact, there is not a single part of the bowl that is well made. The surface is unpolished, and quite rough, with work marks that no attempt was made to remove. A few flattened pellets of clay adhere to the surface.

Five small dishes have an Orange slip (pls. 13, *b*, *d*, *f*, *g;* 15, *a;* 10, *e*, *h*). All have flat bases and flaring sides. Two have painted designs in red and black, in which typical Polychrome geometric patterns, parallel lines, dots, and elongate S-shaped figures, are combined with representative designs in the central portion of the field (in these vessels, the bottom of the inside). The decoration has a cursive slap-dash quality in keeping with the unpolished surfaces and minor irregularities of the vessels. One of the representative motifs seems to be a long-billed bird (pl. 10, *e*). The other is not recognizable; it looks as much like an enraged caterpillar as anything else (pl. 10, *h*). (It is worth noting that the inner wall pattern of these vessels is duplicated, in slightly better brush work, in a misfired Cream-white-slip vessel from trench 22 (pl. 10, *d*).) The other three Orange-slip dishes are undecorated. One, the smallest of the lot (pl. 13, *d*), approximates the painted pair in roughness of surface; the other two are better finished. A companion piece, of the same general shape as the five preceding but with very low walls, differs from them in being of a coarse gritty paste, very similar to that used in Lirios type figurines. Like the others, it is irregular and unpolished.

The eighth dish is quite small (pl. 13, *i*). It is also of the flat-based, flaring-side form, and vies with any of those just described in roughness of manufacture. It is quite lopsided, with unpolished surfaces. It was meant to be of the Cream-white-slipped class, but was badly fired so that the whole exterior and the inside of the rim are a dark-gunmetal blue gray.

The last four of the flaring-side dishes (or small bowls) differ in being very well made with finished surfaces and evenly distributed slip. One is a Gray-slip piece, with flat everted rim (pls. 10, *j*; 13, *e*). On the rim is a motif unique among Tres Zapotes incised designs consisting of a highly conventionalized bird's head, framed by vertical lines. The design is used three times. The intervening spaces on the rim were painted red (faint traces only of the paint can be seen at present). There are three flaring-side dishes which at first glance differ slightly from the run of Gray-slip Polychrome ware (the fact of their unusually good preservation probably causes their different appearance) (pl. 13, *h*, *j*, *k*). The general shape is not remarkable, but the rims are thickened into a compact external roll instead of being flared or everted. The slip is a very light gray with, in two cases, darker firing clouds about the rim. The paste is gray, finely divided with no visible temper, very hard, and quite light in weight. There is no doubt as to their identification as Gray-slipped Polychrome after close inspection.

The remaining seven vessels (one of which was so badly shattered that it was not worth restoring) are open curved-side shapes. One of these is a shallow round-based dish with simple direct rim (pl. 15, *b*). It has a Cream-white slip on the outside, with a design in red. The inside is painted red. The central element, on the base of the vessel is a much eroded four-lobed figure done in a broad continuous line so that it looks like a complicated knot. Around the edge is a close-set row of U-shaped figures with the mouths closed and the ends curled back in smaller loops, probably a variation on the U-element common in Tres Zapotes Polychrome design. Both the design and the bowl interior were painted with a wide unevenly trimmed brush, so that the paint is heavier in some parts of the band than in others. The resulting texture is rather pleasing. This bowl is thin, smooth-surfaced, and well made.

Another shallow curved-base bowl is roughly made (pl. 13, *g*). It is thin-walled, and of a coarse paste from which lumps (or bits of gravel) were not removed. Lumps as big as small shot protrude here and there from the surface. The slip was meant to be Cream-white, but was misfired to a dingy gray with dark-gray firing clouds.

A small dish with gently curved flaring sides and flat base is of the Smoked Black variety of Polychrome (pl. 13, *c*). Most of the surface

has eroded away. The one unrestorable vessel was of the same ware, and apparently of about the same size and shape.

The remaining three vessels are of the hemispherical tripod form, Gray slipped (pl. 15, *c*, *d*, *e*). They have small solid ball feet instead of the cascabel legs more usual in this type of vessel. One, the smallest, is nearly twice as thick-walled as is usual and is unpolished. It and one other have flattened areas on one side as though they had been turned up sideways before the clay was dry (pl. 10, *g*). The largest of the three, which also retains work marks on its surface, has an oval figure painted on one side, and a composite curve figure done in a great bold swirl on the inside. The pigment seems to have been red, originally.

To summarize, the pottery vessels from the trench 23 cache are for the most part of a familiar ware, Tres Zapotes Polychrome. However, they stand out as a lot from normal examples of the ware in their anomalous lack of finish, misshapen forms, and frequent misfiring. The last-minute jerry-built appearance of many of them could be accounted for best if we assume that they were token pieces made expressly for votive purposes.

In contrast to the vessels, the figurines are elaborate and well made. The roughest of them, the aberrant specimens with detachable jaguar and nightjar heads, already described under the head of aberrant figurine types (p. 85; also pls. 53, 54), are bold and rugged rather than crude.

In addition to these 4 figurines (8 pieces counting the heads separately) 2 others have been described previously (p. 90; pl. 50, *f*, *k*). There are 16 specimens of the San Marcos hollow mold-made type, several of which are duplicates (made from the same mold). Nine are of the very fine buff-colored paste so common in this type, 7 are of the less common granular paste. Nearly all show traces of paint or slip. Four specimens, 2 dogs (duplicates; 1 is incomplete), a springing jaguar, and a deer (whose horns, ears, and tail are missing), are mounted each on a pair of hollow transverse clay tubes to make them stand firmly (pl. 49, *a*, *b*, *c*, *f*). These tubes remind one of modern toys with housings for wheels and axles, but none of the tubes show signs of wear on the inside. The jaguar and the dogs have amusing facial expressions, the jaguar snarling and the dogs looking pleased with themselves. The expressions are indicated by conventionalizations—lines about the mouth and eyes reminiscent of modern cartoon styles. The complete dog (perhaps both?) is a whistle. The erect tail is the mouthpiece. Both it and the jaguar have pellets inside to rattle. All 4 had a light-buff to Cream-white slip. The dogs and the deer have traces of stripes in blue paint. The jaguar had horizontal stripes in a dark paint on his body and legs. All but the deer are of the fine paste.

Two realistic little turkeys (pl. 49, *d*, *e*) are of the fine paste, fired to the familiar gray of Gray-slipped vessels. Both are whistles, and both have traces of blue paint.

There are also four partly anthropomorphized jaguars, in a kneeling posture with outstretched arms (three only are figured, the fourth was badly shattered; pl. 50, *c*, *d*, *e*). All were whistles with clay pellets inside. One has the whistle mouthpiece, which is in all cases made after molding, projecting from the top of the head, the rest have it on the side of the haunches. All had a whitish slip, and show faint vestiges of blue-painted areas.

Three figurines from the same mold represent a fat old male, wearing a belt with a snake's head (pl. 48, *a*, *b*, *d*). One figurine was modified before firing, by a slit at the mouth and perforations for nostrils; otherwise they are identical. All contain pellets for sounders. They are made of the slightly coarser type of paste, and have a cream-white slip. One has traces of blue paint on the face and on his breast ornament.

The warrior with bestial face and protruding chest is of the same ware as the three old men (pl. 48, *c*). He is nude save for necklace, enormous earplugs, and his shield. His right arm is raised to grasp the tip of an object probably meant to represent a bow slung on his back.

Two Toad beings, duplicates, also come from the cache (pl. 50, *a*, *b*). They have the characteristic wide flat mouths, warty legs, and holes from front to rear at the pubic region. They differ slightly from the common representations of this being in that the arms are outstretched to the sides.

There are two pieces in the cache lot which unquestionably are the parts of a composite figurine (pl. 52). These differ from those just described in approximating the Lirios figurine type, although they are unique in form and detail. The body is a heavy hand-modeled figure with a cuirass (?) made of appliqué elements and flowing robe standing with its back to a heavy plaque. There is a rounded knob on the body to represent a head, with dabs of clay to suggest the features. The other piece, a mask in the form of a death's head, with elaborate ear ornaments (or flowers in its ears), fits snugly over the head, setting on the edge of the wide collar. A lug projects backward from the mask, resting on the upper edge of the background plaque. There can be no doubt the two belong together, for both are hand-made, of the same coarse reddish brown clay, and have the same type of appliqué ornaments and flangelike appendages.

The five remaining figurines in technique represent San Marcos-Lirios type hybrids. Four are alike (pl. 51, *a*, *b*, *d*, *e*). They represent an elaborately apparelled individual with a background plaque

reminiscent of that of the figurine with the skull mask. All four were obviously made in the same mold, but arms, headdresses, and ornaments were put on in the Lirios appliqué technique. They are made of a coarse red-brown paste similar to that commonly used in Lirios type figurines. All contain sounders.

The last figure, the cocky little chap with his hands on his hips, belongs to the same hybrid variety as the preceding four (pl. 51, *c*). The figure itself is mold-made—the mold seams show clearly on the sides—but arms and necklace are appliquéd on. He is made of the same clay as the other hybrids. A whistle mouthpiece protrudes from his headdress, and there are sounders inside the body.

The 12 perforated clay disks, as mentioned elsewhere, are not reworked sherds, but specially manufactured objects with the perforations made while the clay was soft. Four are made of fine buff paste (these also have crosses in blue paint on one side), 7 are of a slightly gritty orange paste, and one is of quite coarse light-brown material.

It is patent from the types of the figurines as well as from the vessels that the cache belongs to the Upper Tres Zapotes phase. San Marcos and Lirios (or at least Lirios-derived) figurine types, and the highly interesting hybrid forms, place the material beyond question. The aberrant and imported pieces—the figures with detachable jaguar and nightjar heads, the "Jonuta" figurine, and the one in unidentified alien style—are thus tied in to the Tres Zapotes ceramic column, and may eventually be useful for cross-dating. The cache is also important in corroborating our temporal placing of the trench 20 lot of material, in the design parallel of the painted Orange-slip bowls with a trench 20 piece, and the fact that the four detachable head figurines are of the same ware as a fragment from trench 20.

CHARACTERISTICS OF THE CERAMIC PERIODS

With the assistance of ware associations in cache lots and similar concentrations, we are in a better position to define the main aspects of the ceramic phases established by stratigraphic evidence. Even more, we are able to distinguish the intrusive Cremation Burial complex from that of the Tres Zapotes deposits proper. The following paragraphs will summarize the diagnostic features of the several phases, beginning with the earliest.

Lower phase.—The most ancient segment of the Tres Zapotes ceramic column is represented in the collections only by the material from the sub-ash deposit in the Burnt Mounds locality, i. e., from trench 26 and the depth-test pit in trench 24. It was not tapped by any other trenches, either in 1940 or 1939. The chief characteristics of the phase are its exclusive (or nearly exclusive)

monochrome wares, which emphasize vessel form as a field for esthetic elaboration, and the restricted range of figurine types. The net effect is that of a pure and self-contained pottery complex. Although it is the most ancient stratum at the site, there is nothing about either vessels or figurines which suggests that the local ceramic art was in its infancy at that period. Certainly the well-made Brown ware and Black ware vessels with their sophisticated composite shapes and numerous subtypes—flaring-side bowls with simple to wide flat everted rim; incurved-side bowls with tapered everted rims, and with short vertical rims; composite silhouette bowls; spouted vessels (unsupported spout); concave- and vertical-side jars, and composite silhouette jars; thick-rimmed urns; simple, complex, and punctate-face olla necks; and effigy jars; White-slipped, Red-slipped, White-rimmed, etc.—do not suggest even faintly the beginnings of the potter's craft. Similarly with figurines. The closely related A and C subtypes of solid figurines are far less crude than highly stylized, and the single subtype E form is extremely sophisticated. We have no evidence as yet as to the source of the elements comprising the Lower complex. It is quite clear, however, that many of them are ancestral to forms found in the subsequent Middle and Upper Tres Zapotes horizons.

Middle phase.—Following the oldest phase came a period of elaboration and development. The Lower phase wares continue in nearly full dominance. Polychrome ware, whose roots might possibly lie in the Lower complex, or more likely at the base of the Middle, occurs in modest, although constantly increasing, quantity. It would be interesting if we were able to trace the evolution of Polychrome designs through this phase, but poor preservation conditions do not permit us to do so. Manipulation of fundamental patterns is apparent in the figurine complex. The grotesque subtype B, and subtype F can probably be derived from the Lower A and C forms. Subtype D may not be of local origin, but the influence of the Lower punctate technique is apparent in many specimens. The "baby-face" (E) examples in the Middle phase are more elaborate, and many of them have little forelocks ultimately deriving from subtype C. Plate 24 schematically suggests the relationships between the more common Lower and Middle varieties of Tres Zapotes hand-made figurines. It is the Middle, too, that the infrequent bearded forms, and those with what looks like a muffler about their chins occur, and the more variant types of bodies, the angular wide-crotched forked-foot type, and those with tripods, and socketlike whistles occur. In brief, the Middle phase was primarily one of local development of older ceramic patterns.

Upper phase.—Unlike the preceding phase, the Upper horizon is marked by an influx of new traits which have no discernible local antecedents. There are, it is true, a sufficient number of persistences to indicate that we are dealing with a cultural continuum; all the Middle phase wares are present, although Polychrome is increasingly abundant at the expense of the monochrome types. There are also modifications of certain forms, such as the change to unslipped bases and slab legs in Brown ware bowls. Tres Zapotes hand-made figurines persist; there are too many to have all been "carried up." Yet there are innovations as well: Incensario ware and Comales make their debut at or just prior to the beginning of the Upper times. The complete list of new elements is overwhelming. In addition to the foregoing there appear flaring olla necks with out-rolled rim, upward-slanting triangular lugs, vertical zoomorphic handles, horizontal zoomorphic "dipper" handles, carved hollow slab feet, "drums," punch-stamped faces on olla necks, hemispherical and conical mold-made spindle whorls, San Marcos mold-made figurines in endless variety, Lirios type figurines, bossed incensarios with annular bases, Carved ware and (probably) Lost-color ware, hooded-spout effigy ollas, candeleros, flutes, panpipes, ocarinas. There is no evidence of unconformity in the deposits during which these traits might have been developed, or even introduced gradually. They appear simultaneously and full blown. The only conceivable explanation of such an array of new traits is that of a sudden exposure to new cultural influences, concomitant with the florescence of some alien culture center. This phase, or at least the end of it, must have been a period of great activity in mound-building, as well, for much of this material is contained in the mounds.

Soncautla period.—It is scarcely necessary to review the evidence for the unconformity of the Soncautla horizon again. Suffice it to say that a period of time occurred at the end of the Upper Tres Zapotes phase, during which the jungle encroached on the abandoned site, and deposited humus materials in the superficial soil zones. That this forestation occurred before the appearance of the Soncautla complex, and not after, is made obvious by the humus-stained pitfall of burial pits dug into the clean brown layers. The occupation responsible for these intrusive remains was likely a brief one, for despite the fairly thorough prospecting of the site, no extensive occupational deposits assignable to this culture have been found.[36] The ceramic complex is completely new. There are no

[36] A few superficial sherds of Soncautla wares were found in the plaza in front of the long mound in Group 2, in 1939. No really distinct deposit was found there, however. In 1940 a small quantity of sherds of this complex were recovered in the excavation of the large mound in Group 3 (trench 16), presumably from the surface of the platformlike foot of the mound.

direct links with Tres Zapotes pottery traditions. The distinctive elements have already been listed. Following this period, there is no evidence of occupation of the site until historic times.

SIGNIFICANT ABSENCES

In view of the amount of digging done in two seasons with 30-man crews, the fact that certain traits and trait-complexes found elsewhere in Middle America have never been noted in Tres Zapotes must be significant. That is to say, negatives must be regarded as conclusive. One such negative relates to a widespread pottery type, Plumbate ware. Not a single Plumbate sherd has come from the digging or from the lots of locally purchased material. Nor has the complementary ware, Fine Orange, been found at the site.[37] Yet Fine Orange is regarded by Vaillant as a Veracruz product; at least the type station is in Veracruz not many days' foot-journey from Tres Zapotes. The absence of these two widely traded wares is beyond all doubt to be reckoned with in placing the Tres Zapotes ceramic column temporally.

A similarly established absence, and likewise one of chronologic import, is that of metal. At contact times both copper and gold seem to have been plentiful in central Veracruz and to the southeast as well, and Strebel's researches have demonstrated the widespread occurrence of metallurgy in the area (Strebel, 1885–89, vol. 1, p. 89 and passim). Yet not a single scrap of metal of any sort has come from the Tres Zapotes site. In the Museo Nacional de Mexico are two copper artifacts which Sr. Valenzuela has recovered from a site near San Andrés Tuxtla. The ceramic patterns, to make an offhand judgment of a few displayed specimens, have a strong Upper Tres Zapotes flavor, as though they had been derived from that complex at or shortly after the abandonment of the site. In other words, the only occurrence of metals in the region is from a site which apparently is later than the final Tres Zapotes horizon. Tres Zapotes itself is unquestionably a premetal site.

CHRONOLOGY

So far the ceramic column which we have established at Tres Zapotes has not been placed temporally. Various elements have been placed relative to each other, in terms of Lower, Middle, and Upper phases, and the (post-Tres Zapotes) Soncautla complex. Our final task is that of pointing out the place of this sequence in terms of other established sequences in the Middle American area, and so far as possible, in terms of our Christian chronology. To do this we shall consider the evidence relative to each of the phases in turn.

[37] One 1939 specimen approaches somewhat the typical Fine Orange annular-base vase shape, but is made of Polychrome paste and slip, and can scarcely be said to represent a true Fine Orange horizon.

LOWER TRES ZAPOTES

One bit of internal evidence bears on the placing of the Lower phase. It will be recalled that there was a bar-and-dot numeral carved in relief in the sandstone associated with the isolated Lower horizon of trench 26. This is a numeral of the same type as those on the re-used stela discovered in 1939.[38] Assuming—although it cannot be demonstrated as yet—that the Stela C date, 7.16.6.16.18, is based on the same calendar as that of the Maya, and counts from the same starting point, it calculates out 31 B. C. by the Thompson-Goodman-Martinez correlation. Thus there is a suggestion, even if an uncertain one, that the Stela C date refers to the Lower phase. By itself this piece of evidence is of slight value, but if we find corroborative facts it must be accepted.

Comparative analysis of the ceramic material substantiates this dating of the Lower phase in no small degree. While lack of information from intervening sites hampers comparisons, and the great linear distance makes long lists of identities unlikely, the Tres Zapotes Lower phase material alines fairly well with the early ceramic patterns of the Maya area as exemplified by the Mamom and Chicanel periods at Uaxactun, San José I, and Playa de los Muertos, and by some of the material from Kaminaljuyú.[39] The monochrome wares, Black and Brown (or "Red"); the prevalence of flaring-side bowls with a tendency toward wide everted, often grooved, rims; scarcity or absence of feet and legs (except Kaminaljuyú); the unslipped "raked" olla tradition; the manufacture of small hand-made figurines, usually solid and most frequently representing females; all these run like warp threads through these early pottery complexes, suggesting a fundamental kinship. More specific points of likeness are the early Uaxactun (Mamom?) punctate faces on olla necks (Ricketson and Ricketson, 1937, pl. 76) and the small whistles in the form of birds with loops back of the heads for suspension (Ricketson and Ricketson, 1937, pl. 77, *a*, *b*, *c*), present also in Lower Tres Zapotes. In regard to figurines, one published Uaxactun specimen (Ricketson and Ricketson, 1937, pl. 73, *b*, 1 and 5) suggests a form intermediate between Tres Zapotes subtypes A and B (the prominent nose and mouth are reminiscent of the latter subtype; the eyes have punctations for pupils, but a non-Tres Zapotes form of opening). Another (Ricketson and Ricketson, 1937, pls. 73, *b*, 2, 4, *c*, 6; 74, *c*, 1 to 5) in wideness of the face, the little strip of hair running transversely across the top, appears somewhat like Middle Tres Zapotes subtype E, although again the treat-

[38] Stirling, 1939. The same author (1940 a) has pointed out stylistic similarities of the stela to early dates and carvings elsewhere in Middle America.

[39] Ricketson and Ricketson, 1937, and supplementary data kindly furnished by R. E. Smith; Thompson, 1939; Strong et al., 1938; Kaminaljuyú data from material on exhibit at Peabody Museum, Cambridge, Mass.

ment of the eyes differs. From Kaminaljuyú also come figurines similar in form to Tres Zapotes B and E subtypes.[40] It can scarcely be doubted that we are dealing with a single monochrome ware handmade figurine complex that extended from the Petén to (at least) southern Veracruz. That both parallels and important differences occurred in the Guatemala highlands, and, as will be brought out shortly, in early Valley of Mexico horizons, suggests that this early monochrome base may set off an early lowland culture province.

The importance of the unity of Lower Tres Zapotes and Early Mayan ceramic patterns is brought into stronger relief by the rather unexpectedly low trait correlation between the Lower Tres Zapotes and early Valley of Mexico complexes (El Arbolillo I, Early Zacatenco, Gualupita I) (Vaillant, 1930, 1935 b; Vaillant and Vaillant, 1934), although the Petén is nearly again as far, airline, from our site as the Valley is. Points of difference are almost innumerable; a summary of the early Valley foci includes such comprehensive traits as more slip colors than in Lower Tres Zapotes, use of painted decoration, common occurrence of such form elements as feet and legs, handles, bottle, ladles, as well as the absence of most of the diagnostic Lower Tres Zapotes elements.[41] In regard to figurine types, Vaillant's Type A, which he regards an introduced form (perhaps from Veracruz),[42] is the only one close to the early varieties at Tres Zapotes. The correspondences consist chiefly in the broad facial proportions, simple turban, and occasional central punctations in the eyes (Vaillant, 1930, pp. 45, 120; pl. 21). Tres Zapotes subtypes A and C are characteristically broad-faced and heavy-jowled, with individual examples of C attaining the maximum relative broadness. Figurines of subtype A are distinguished by turbans, usually simple. The punctate eyes of Vaillant's type A are put into a wide eye opening more like that of early Uaxactun than Tres Zapotes forms; a common form of eye seems to be that made by two laterally directed gouges without a punctation.

All in all, available evidence shows far fewer linkages between the Highland and Tres Zapotes early horizons than those existing between the latter and those of the early Lowland Maya.

From Monte Albán comes a pottery sequence extending back over a long-period of time (Caso, 1935). Yet, as in the case of the Valley of Mexico horizons, the list of differences in early periods at Monte Albán far outweighs the similarities. Such traits as fre-

[40] Material on exhibition in the Peabody Museum of American Archaeology and Ethnology, Cambridge, Mass. Kidder speaks of similarities between Kaminaljuyú and early Valley of Mexico figurines (Kidder, 1940, p. 119).

[41] This summary is taken from the papers by Vaillant, and Vaillant and Vaillant, just cited, especially 1935, table 17; 1930, table 2; 1934, table 2.

[42] Vaillant, 1935, p. 197 and footnote 3. The type A figurines occur in the Valley of Mexico after the close of the earliest horizons.

quent occurrence of legs and feet (Caso, 1935, figs. 32, 34, 35, 40, 42), pot stands (Caso, 1935, fig. 38), bowls with basal flanges (Caso, 1935, figs. 34, 36, 40), bowls with engraved lines ("lineas raspadas") on the interior base (Caso, 1935, p. 22, fig. 33), bottlelike forms (Caso, 1935, figs. 32, 35, 36), painted decoration (Caso, 1935, p. 32 (C9, C22)), give the Monte Albán I and II pottery configurations a completely different aspect from that of Lower Tres Zapotes.

In recapitulation, the Lower Tres Zapotes pottery complex seems to fit into an early lowland pattern that extends as far south and east as the Petén and the Ulua Valley, which forms a unit as contrasted to the early highland complexes as manifested at Kaminaljuyú, Monte Albán, and the Valley of Mexico.

While collections from the Huasteca are not uncommon, too little work has been done in that region to afford really comparable material. Staub (1921) has given some brief accounts of investigations there, concerning himself mainly with figurine types. Two forms, quite different in technique, occur contemporaneously throughout the deposits (Staub, 1921, p. 221). One of these, the "pastillage" type, is manifestly related to the Tres Zapotes hand-made figurine pattern, with punctate features, simply modeled head and body, turban, etc. The Huasteca heads, disproportionately small as compared to the bodies, with their typically triangular faces, give the pieces a distinct flavor, however. The two styles are probably related, but rather remotely. Further investigations may clarify the relationship of the two technologically different patterns in the Huasteca.

MIDDLE TRES ZAPOTES

The Middle phase at Tres Zapotes is in essence a transitional period in which Lower patterns were both modified and elaborated, and a new fast-growing Polychrome tradition appeared. The linkages, insofar as they may be discerned, are with the preceding phase rather than with other regions.[43]

UPPER TRES ZAPOTES

The Upper phase is distinguished by two types of elements, first, its abundant Polychrome ware which grew out of the Middle phase Polychrome, and second, a corpus of traits without local antecedents. The Polychrome pottery stands somewhat apart from known wares in the area. A few decorated pieces have a faintly "Mayoid" flavor, but this seems to stem from the color combinations—red, orange, and black-and-white on a buff slip, and from the use of conventionalized

[43] R. E. Smith has pointed out to the writer that while the general pattern and trends of the Petén are paralleled in Lower Tres Zapotes, nothing referable to the Tzakol phase occurs at our site. In view of the apparent continuity of the Tres Zapotes occupation, it would appear that the region must have been isolated—a sort of backwash during the Tzakol development. In later times, as will be seen, another line of communication was established.

representative motifs rather than from any very specific parallels. Nearer home in point of distance, and in style as well, are certain Ranchito de las Animas materials. Bold-line design, the leaving of large areas of background (slip color), and certain design elements such as dot fillers, series of U-shaped and S-shaped figures, some conventionalized birds and animals, all Tres Zapotes Polychrome traits, are figured by Strebel among specimens from Ranchito de las Animas (Strebel, 1885–89, vol. 1. Cf. especially pl. 4, figs. 31, 46; pl. 5, fig. 23). Yet the total pottery complexes are not very close. Differences between Tres Zapotes and Cerro Montoso painted wares have been mentioned. Characteristic traits of the latter complex such as post-firing incised outlines of design elements, application of heavy masses of color, frequent use of angular motifs, such as stepped frets, etc. (Strebel, 1885–89, passim), definitely set it apart from the Tres Zapotes style of decoration. Even less like the Tres Zapotes complex is the Island of Sacrificios material as described by Nuttall (1910), with its numerous late features—Fine Orange and Plumbate wares along with what appear to be late Mexican and Mixtecan pieces.

Our summary comparison, all in all, does not yield much, except to accentuate the individuality of Upper Tres Zapotes material, and to bring to mind again the significant absences of such late types as Fine Orange and Plumbate. About the only set of specific parallels seems to be with Ranchito de las Animas, itself only vaguely placed in time.

When we turn to the list of new Upper phase traits we are on more fruitful ground for drawing comparisons. A considerable number of these elements occur at Teotihuacán, particularly in the later horizons. The list of these "Teotihuacán" features in Upper Tres Zapotes includes: Mold-made figurines, figurines with jointed arms, vertical modeled lugs, "candeleros," mold-made spindle whorls, hollow slab legs with T-shaped openings, scutate pot lids with modeled ornament (one only from Tres Zapotes). (Linné, 1934, pp. 123–124 and figs. 199–208; Seler, 1915, pl. 32, figs. 1–2, pp. 491–496, figs. 122–135; also Linné, 1934, p. 52, and figs. 21, 28, 29, 38, etc., pp. 114–115, figs. 151–164, p. 126 ff.) The sudden appearance of this host of traits at Tres Zapotes points beyond all question to a new source of cultural stimulus, to importations of patterns and techniques. That these elements must have diffused from Teotihuacán to Tres Zapotes and not the other way around, is demonstrated by the complete lack of antecedents for them in the earlier Tres Zapotes horizons. It should be noted, too, that while certain of these traits are widely distributed, their occurrence in an integrated corpus at Teotihuacán points to that culture as their source.

This Teotihuacán linkage, together with the previously mentioned absence of Fine Orange and Plumbate wares, suggests a temporal

placing of the Tres Zapotes Upper phase. That is to say, the beginning of the phase is marked by elements derived from Teotihuacán, and closes before the spread of Fine Orange and Plumbate. In the absence of information as to just which period of the Highland culture the derived traits belong, it is difficult to set a date for the beginning of Upper Tres Zapotes, but it cannot have been earlier than the eighth century A. D. (Vaillant, 1935, p. 259) and, allowing a time lag for diffusion, may well have been a century or so later. The close of the period can be more precisely dated. The absence of Plumbate and Fine Orange indicates, according to Thompson's recent trait chronology, a period more or less contemporary with Uaxactun Late III and all but the latest (copper-bearing) portions of San José V, and prior to the first Mexican period at Chichen, which he dates at 987 A. D. (Thompson, 1939, p. 234 ff.). To use round numbers, 1000 A. D. is probably the most reasonable estimate for the end of the Tres Zapotes occupation. Such a date would seem to be consistent with the evidence of soil development.

It is not yet possible to assign a date, even approximately, to the close of the Lower phase and beginning of the Middle. In view of the essential similarity of the lowland early complex, however, one would expect the appearance of Polychrome ware at Tres Zapotes to correspond in time at least roughly with the appearance of Polychrome decoration elsewhere in the lowland. That is to say, if our assumption is at all valid, the beginning of Middle Tres Zapotes should be contemporaneous with Holmul I or Uaxactun II, i. e., in the fifth or sixth centuries A. D.[44]

THE SONCAUTLA COMPLEX

It is scarcely necessary to discuss at length the typologic affiliations of the Soncautla complex, since that has already been done in accounting for the name given it (p. 106). Worth noting, however, is the fact that a number of the vessel forms recur in nearby regions (though not associated into a single complex as at Soncautla), and that wherever we are able to date them they are quite late. Strap-handled pitchers and strap-handled shoe pots have been found in Monte Albán V (Caso, 1935). Chile grinders occur in the Valley of Mexico only in Aztec times (Noguera, 1935). Strebel (1885–1899, vol. 1, pl. 8, fig. 19) figures a three-handled olla (with vertical strap handles) from Chicuasen. Cremation, too, appears to be a late element in the Valley.

As to the chronology of the Soncautla complex, little can be said with certainty. We must rely on estimates of the less precise sort. It is evident that between the end of the Upper Tres Zapotes phase

[44] Composite table (table 11) in The Maya and Their Neighbors (Hay, Linton, Lothrop, Shapiro, and Vaillant, eds., 1940).

and the intrusion of the new complex the jungle took over the site, and for long enough to alter the composition of the superficial soil layers. There is no data on the length of time necessary for such a process. However, it is known that the jungle growth is quite rapid. The great crater of San Martín Tuxtla, which last erupted in 1793, and in which considerable fumarole activity continued until at least 1829, supported a heavy jungle growth 15 to over 30 feet high in 1922. Even the 1793 cones were grown over (Friedlaender and Sonder, 1924). We have a more detailed record from Irazú in Costa Rica (Tristan, 1924). This volcano erupted violently in 1723. Minor activity continued, though gradually decreasing, until 1886. By 1894 there was "dense vegetation in some parts of the crater," and in 1910, when some of the 1723 cones renewed activity, "luxuriant" plant growth was noted in the detritus in one of the inactive cones (Tristan, 1924, p. 96). In other words, a few decades is long enough for tropical vegetation to reestablish itself even in the burned gas-filled soil of a volcano.[45] It is, therefore, not necessary to allow much of a time interval between the abandonment of the site about 1,000 A. D. and its reforestation. The length of time necessary for the intrusion of humus materials into the upper layer of the soil cannot be gaged accurately, but probably a century or two would suffice.[46] A thirteenth century date seems about right for the Soncautla complex. As previously stated, it does not seem to have been of long duration.

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[45] The mountain-building activity, and that responsible for the great craters, of course occurred much earlier. The 1793 and 1723 eruptions were comparatively minor ones. Friedlaender (1924, p. 165) gives evidence for the beginning of volcanic activity in the Tuxtla region in the Miocene.

[46] It must be noted that the formation of a real humus layer is not involved here. That, according to most soil technologists, is probably a very long gradual process even in the temperate zone. What has occurred at the site is that humus materials have been intruded into the upper part of the soil horizon, probably by decay of roots and the leaching of decomposed vegetable materials from the surface. The black layer on unoccupied parts of the site is shallower than in the relatively looser deposits.

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EXPLANATION OF PLATES

PLATE 1

Various wares, showing color range.

Fig. 1. Polychrome sherds, showing color range. *b*, *c*, *e*, *f*, Buff-slipped; *a*, *d*, *g*, *h*, *i*, *j*, Cream-white slip.

Fig. 2. Various wares, showing color range. *a*, *g*, *k*, Variations of Brown ware slips (*g* is modeled tab of flaring-rim bowl); *b*, *d*, Orange slipped Polychrome with slightly aberrant designs; *c*, *e*, Lost-color ware; *h*, *j*, Gray-slipped Polychrome; *i*, Smoked Black Polychrome.

PLATE 2

View of Tres Zapotes Mound Group 1, from westernmost mound. For clarity, most of the heavy vegetation has been omitted from this drawing. (Drawing by Edwin G. Cassedy.)

PLATE 3

Views of Tres Zapotes Mound Groups 2 and 3. Upper drawing, Group 2; lower drawing, Group 3, from long mound of group. For clarity, much of the heavy vegetation has been omitted from these drawings. (Drawings by Edwin G. Cassedy.)

PLATE 4

General views of land forms in Tres Zapotes region.

Fig. 1. View to north from main mound, Group 3. Note broken character of country.

Fig. 2. Looking east toward Tuxtla Mountain from main mound, Group 3.

PLATE 5

Trenches.

Fig. 1. North wall of trench 1. The trim line runs just above the sandstone flagging. Textural difference between the clayey upper zone and the lighter lower zone appears clearly. (Photograph by R. H. Stewart (132258T).)

Fig. 2. Pit in sandstone base of trench 13.

PLATE 6

Trenches.

Fig. 1. Trench 19, north wall. Dark lower portion of wall is moist lighter soil. Workman on right is cleaning out eroded gully in basal sandstone.

Fig. 2. Trench 22. Note structural features of mound. (Photograph by R. H. Stewart (13354T).)

PLATE 7

Trench 27, showing layer of volcanic ash. The culture-bearing deposit appears as light-colored area between ash layer and dark clayey subsoil at base of section.

PLATE 8

Fig. 1. Secondary burial in midden layers, trench 1.

Fig. 2. Thick-rimmed Brown ware urn containing burial, another urn (broken), and miscellaneous objects, trench 19.

PLATE 9

Cache lots of pottery.

Fig. 1. Trench 23 cache of figurines and vessels. (Photograph by M. W. Stirling (13867T).)

Fig. 2. Intrusive Soncautla complex grave lot, trench 10. Arrows point to edge of black pitfall at base of pit. (Photograph by R. H. Stewart (13362T).)

PLATE 10

Polychrome bowls. *a* to *c*, Trench 24; *d*, trench 22; *e* to *j*, trench 23, cache.

PLATE 11

Polychrome ware. *a*, *b*, Dishes; *c*, *d*, drums; *e*, fragment of spouted effigy vessels; *f*, hooded olla neck in form of animal head. All but *d* from trench 24; *d*, purchase collection.

PLATE 12

Restored Polychrome olla (or spouted vessel?) with hooded mouth. *a*, Profile; *b*, front view.

PLATE 13

Polychrome bowls and dishes. Trench 23, cache; *c*, *e*, *f*, are the same as *h*, *i*, *j*, of plate 10.

PLATE 14

Vessel supports. *a* to *g*, Polychrome; *h*, *i*, White-slipped Brown ware.

PLATE 15

Polychrome bowls and dishes from trenches 23 to 24, and hybrid forms from trench 4. *a* to *i*, Polychrome bowls and dishes; *j*, *k*, hybrid forms, Brown ware shapes and paste and Polychrome decoration. *a* to *f*, Trench 23, cache; *g* to *i*, trench 24; *j*, *k*, trench 4, cache.

PLATE 16

Polychrome vessels and miniature bossed incensario. *a*, Flaring-side bowl, trench 1; *b* to *d*, *f*, *g*, miniature ollas and bowls, trench 20; *e*, miniature incensario, trench 20; *h*, large composite silhouette Brown ware urn, trench 19. The sherds were contained in the thick-rimmed urn shown in plate 8, figure 2.

PLATE 17

Brown ware and Unslipped Olla forms. *a*, Inturned-side bowl with tapered everted rim; *b*, base fragment of concave-side jar; *c*, incurved-side bowl with short vertical rim; *d*, flaring-side bowl with solid slab legs and unslipped base; *e*, spouted vessel; *f*, flanged base of vertical-side jar (Red-slipped); *g*, *h*, small bowls or dishes; *i*, neckless olla with slanting triangular lug; *j*, punctate face on olla neck; *k*, simple neck of large olla. *j* and *k* are Unslipped Olla specimens. The same forms occur in Brown ware. *a*, Trench 10; *b*, trench 1, 72+ inches; *c*, trench 19, 60–72 inches; *d*, trench 24; *e*, trench 8; *f*, trench 10, brown mix; *g*, trench 19, 48–60 inches; *h*, trench 4, cache; *i*, trench 1, 24–30 inches; *j*, trench 19, 60–72 inches.

PLATE 18

Stamped and punctate faces on olla necks, and jars. *a*, Polychrome stamped face on olla neck; *b*, punctate face on olla neck, Brown ware; *c*, punctate face (effigy) jar; *d*, modeled and punctate face on olla neck, with asphalt paint, Brown ware; *e*, hybrid Brown ware-Polychrome jar; *f*, White-slipped Brown ware jar. *a*, Trench 24; *b*, trench 1, 66–72 inches; *c*, trench 1, 54–60 inches; *d*, trench 13, 12–24 inches; *e*, trench 4, cache; *f*, 1939 collection.

PLATE 19

Various Brown ware and Black ware vessels. *a* to *d*, front and profile views of Brown ware miniature spouted vessels with modeled faces on necks. *a*, White-slipped; *b* to *d*, asphalt painted; *e*, *f*, White-slipped Brown ware bowls; *g*, Black ware, with white areas from overfiring; *h*, small White-rimmed Black ware bowl; *i*, White-slipped Brown ware dish. *a* to *d*, Trench 10, brown mix; *e*, *f*, 1939 collection; *g*, trench 22; *h*, trench 10, black topsoil; *i*, trench 4, cache.

PLATE 20

Black ware jars. *a*, Upper portion of composite silhouette(?) jar; *b*, concave-side jar; *c*, *d*, composite silhouette jars. *a*, *b*, Pre-firing incised designs; *c*, *d*, post-firing incised. All from 1939 collection.

PLATE 21

Black ware vessels and sherds with irregular areas of white from firing. *a* to *f*, Black ware vessels; *g* to *j*, Black ware sherds with irregular areas of white, from firing. *a*, Variant of concave-side jar (?); *b*, small concave-side jar; *c*, vertical-side bowl; *d*, inturned-side bowl with white-fired base; *e*, small White-rimmed bowl or dish; *f*, dish with irregular white areas. *a*, 1939 collection; *b*, trench 1, 72+ inches; *c*, trench 13, 12–24 inches; *d*, trench 4, cache; *e*, trench 10, black topsoil; *f* to *j*, trench 22.

PLATE 22

Carved ware sherds. *a*, Trench 2, 12–18 inches; *b*, trench 1, 12–18 inches; *d*, trench 24; *c*, *e*, purchase collection.

PLATE 23

Soncautla complex types. *a* to *k*, Trench 10, intrusive burial 1; *l*, from 1939 "surface (cremation) burial."

PLATE 24

1939 restored vessels, Soncautla complex. *a*, *b*, *e*, Soncautla forms from cremation burials; *c*, Cerro Montoso form, provenience uncertain; *d*, *f*, Cerro Montoso type bowls, from cremation burials. *a*, *b*, Same scale as *d* and *f*.

PLATE 25

Miscellaneous sherds. *a* to *c*, Sherds showing holes for "crack-lacing"; *d*, sherd used as awl sharpener; *e*, *f*, fragments of appendages of Lirios type figurines, showing mat impressions; *g* to *i*, fragments of vertical flanges of incensario lid. *a* to *d*, Trench 22; *e* to *i*, trench 20.

PLATE 26

Typology of Tres Zapotes hand-made figurines, showing profiles. Letters correspond to subtype designations (*a*=subtype A etc.). 1939 collection.

PLATE 27

Schematic representation of development and hybridization of Tres Zapotes hand-made figurines. The San Marcos type specimens at the top indicate the contrast between the two types. *a*, *c*, *d*, Trench 10, black topsoil; *b*, purchase collection; *e*, *h*, trench 22; *f*, *k*, *l*, *m*, *p*, purchase collection; *g*, *i*, 1939 collection; *j*, trench 16, Lot C; *n*, trench 10, brown mix; *o*, trench 16, Lot D; *q*, trench 26, 225–237 inches; *r*, trench 26, 261+ inches.

PLATE 28

Stratigraphy of trench 1 figurines (0 to 42 inches; only more nearly complete specimens figured). *a* to *g*, 0 to 12 inches; *h* to *o*, 12 to 18 inches; *p* to *x*, 18 to 24 inches; *y* to *bb*, 24 to 30 inches; *cc* to *dd*, 30 to 36 inches; *ee* to *ff*,

36 to 42 inches. *a*, *b*, *c*, *i* (whistle), *j*, (ocarina), *l* (whistle), *p*, *q*, *r* (whistle), *s* (whistle), *t* (pendant), *v*, *y*, *z*, San Marcos mold-made type. *h*(?), *aa*, *bb*, Lirios modeled type. *d* (A), *f* (B), *m* (AF hybrid), *n* (CF hybrid), *o* (B), *w* (B variant), *x* (A), *bb* (bird), *dd* (B), *ee* (A), *ff* (animal), Tres Zapotes hand-made type (capital letter indicates subtype). *e*, *k*, Mold-made spindle whorls. *u*, flat seal.

PLATE 29

Stratigraphy of trench 1 figurines (42 to 72+ inches; only more nearly complete specimens figured). *a*, 42 to 48 inches; *b* to *g*, 48 to 54 inches; *h*, *i*, 54 to 60 inches; *j*, intrusive in 54–60 level; *k* to *q*, 60 to 66 inches; *r*, *s*, 66 to 72 inches; *t* to *dd*, 72+ inches, *b*, *j*, Lirios modeled type. *a* (AF hybrid), *c* (AE hybrid), *d* (B), *e* (A), *f* (AD hybrid), *h* (A), *k* (bearded A (?) variant), *l* (bearded A variant), *m* (C variant), *n* (A), *o* (C variant), *p* (D), *q* (C), *r* (A), *s* (C), *t* (A), *u* (A variant), *v* (C), *w* (A), *x* (A), *y* (C variant), *z* and *aa* (birds), *bb* and *cc* (whistles), Tres Zapotes hand-made types (capital letter indicates subtype). *i*, aberrant type, perhaps Tres Zapotes; *g*, Polychrome olla neck with stamped face; *dd*, flat seal.

PLATE 30

Stratigraphy of trench 1 figurine bodies and miscellaneous objects (only more nearly complete specimens figured). *a*, *b*, 0 to 12 inches; *c* to *h*, 18 to 24 inches; *i*, 24 to 30 inches; *j*, *k*, 30 to 36 inches; *l*, *m*, 36 to 42 inches; *n*, *o*, 42 to 48 inches; *p* to *r*, 48 to 54 inches; *s*, 54 to 60 inches; *t* to *v*, 60 to 66 inches; *w*, *x*, 66 to 72 inches; *y* to *bb*, 72+ inches. *a*, *b*, *d*, *e*, *f*, *i*, *n*, *p*, *q*, *s*, *t*, to *w*, *y* to *bb*, Tres Zapotes flat modeled type. *c*, *j*, *x*, Tres Zapotes angular type. *h*, vertical modeled lug fragment; *k*, Polychrome olla with stamped face; *l*, perforated sherd disk; *m*, *o*, objects of unknown use; *r*, "frying-pan" type incensario.

PLATE 31

Stratigraphy of trench 13 figurines (only more nearly complete specimens are figured). *a*, *b*, 0 to 12 inches; *c* to *k*, 12 to 24 inches; *l* to *o*, 24 to 36 inches; *p* to *w*, 36 to 48 inches; *x*, 48 to 60 inches; *y*, *z*, 60+ inches. *b*, Foreign (Central Veracruz) type. *a* (D), *c* (A), *d* (D variant), *e* (D), *f* (B), *g* (B), *h* (D), *i* and *j* (animals), *k* (monkey, whistle), *l* (A variant), *m* (A variant), *n* (D), *o* (animal), *p* (A variant), *q* (B variant), *r* (B, note angular type body), *s* (C variant), *t* (A variant), *u* and *v* (animals), *w* (bird, whistle ?), *x* (A), *y* (D), *z* (AF hybrid), Tres Zapotes hand-made type (capital letter indicates subtype).

PLATE 32

Stratigraphy of trench 13 figurine bodies and miscellaneous objects (only more nearly complete specimens are figured). *a*, *b*, 12 to 24 inches; *c* to *g*, 24 to 36 inches; *h* to *l*, 36 to 48 inches; *m*, 48 to 60 inches; *n* to *v*, 60+ inches. *a*, *c*, *d*, *e*, *f*, *j*, *i*, *k*, *m*, *n*, *q*, Tres Zapotes flat modeled type (*h*, with a whistle on the back, and *q*, with a tripod support, are variants). *j*, *o*, *p*, Tres Zapotes angular type; *b*, *g*, two-tone plain whistles (Tres Zapotes type); *l*, *r*, zoomorphic whistles (Tres Zapotes type); *s*, cylindrical seal; *t*, *u*, perforated sherd disks; *v*, stone (green diorite ?) mask fragment, with jaguar mouth.

PLATE 33

Stratigraphy of trench 19 figurines and miscellaneous objects (only more nearly complete specimens figured). *a* to *h*, 0 to 12 inches; *i* to *q*, 12 to 24 inches; *r* to *t*, 36 to 48 inches; *u* to *w*, 48 to 60 inches; *x* to *z*, 60 to 72 inches; *aa*, 72 to 84 inches; *bb* to *ee*, 84+ inches. *a*, *c*, *d*, *i*, *r*, San Marcos mold-made type (*b* is plaster cast from *a*; *r* is Polychrome pot lid with mold-made ornament—to different scale from other figures). *k*, Fragment of Lirios type figurine. *f* (C), *g* (A), *h* (A), *l* (A), *n* (B), *o* (F variant), *q* (C), *s* (A variant), *t* (EF hybrid), *u* (A), *v* (A), *w* (A), *x* (E), *y* (A), *aa* (B variant), *bb* (A), *cc* (A), *dd* (bearded B variant), *ee* (A) Tres Zapotes hand-made type (capital letter indicates subtype). *p*, *z*, aberrant (foreign?) types; *j*, mold-made spindle whorl; *c*, handle? or leg?

PLATE 34

Stratigraphy of trench 19 figurine bodies and miscellaneous objects (only more nearly complete specimens figured). *a* to *c*, 0 to 12 inches; *d*, *e*, 12 to 24 inches; *f*, 24 to 36 inches; *g*, 36 to 48 inches; *h* to *p*, 48 to 60 inches; *q* to *t*, 60 to 72 inches; *u*, 72 to 84 inches; *v* to *bb*, 84+ inches. *a*, *f*, *n*, *p*, *r*, *s*, *u*, *z*, *aa*, *bb*, Tres Zapotes flat modeled type (*z* has a whistle on the back). *j*, *m*, *t*, *y*, Tres Zapotes angular type; *b*, *c*, *d*, *g*, *h*, *w*, animals (mostly monkeys); *v*, jaguar-head fragment (aberrant type); *i*, bird whistle; *l*, plain whistle; *e*, *k*, *o*, perforated sherd disks; *q*, fragment of subtype E variant figurine (?); *x*, flat seal.

PLATE 35

Stratigraphy of trench 26 figurines (only more nearly complete specimens figured). *a* to *c*, 189 to 201 inches; *d*, 201 to 213 inches; *e*, *f*, 213 to 225 inches; *g* to *i*, 225 to 237 inches; *j* to *p*, 237 to 249 inches; *q* to *t*, 249+ inches. *a* (A), *b* (A), *c* (C variant), *d* (C), *e* (C), *f* (A), *g* (A), *h* (C), *i* (C), *j* (A), *k* (A), *l* (A), *m* (A), *n* (C), *o* (C), *p* (C), *q* (C, on small vessel rim), *r* (C), *s* (C), *t* (E, small effigy vessel), Tres Zapotes hand-made type (capital letter indicates subtype).

PLATE 36

Stratigraphy of trench 26 figurine bodies and miscellaneous objects (only more nearly complete specimens figured). *a*, *b*, 189 to 201 inches; *c* to *f*, 213 to 225 inches; *g* to *i*, 225 to 237 inches; *j* to *o*, 237 to 249 inches; *p* to *t*, 249+ inches, *d*, *e*, *g*, *h*, *i*, *j*, *k*, *q*, *r*, *t*, Tres Zapotes flat modeled type; *c* (animal, whistle ?), *n* (monkey), *s*, turtle; *l*, *m*, (birds, whistles); *a*, rectanguloid miniature vessel; *b*, pottery bead (?); *f*, *o*, imperforate pottery disks; *p*, (mottled) Black ware cascabel-leg fragment.

PLATE 37

Miscellaneous figurine types (purchase collection). All but *q*, *r*, *s*, *aa*, Tres Zapotes hand-made type. *a*, *b*, *c*, *e*, *i*, *j*, Subtype A; *d*, B variant; *f*, subtype C; *g*, A variant; *h*, E variant (?); *k*, C variant; *l*, D variant; *m*, *n*, D; *o*, subtype F; *p*, A variant; *t* to *z*, animals, mostly whistles; *r*, Polychrome ware monkey-head dipper (?) handle, showing relation to rim; *s*, aberrant type (Soncautla complex ?); *aa*, aberrant type.

PLATE 38

Miscellaneous figurine types (purchase collection). *a*, *b*, *q*, Tres Zapotes hand-made type (*a*, *b*, subtype E variants); *c*, *i*, foreign (Central Veracruz types); *e*, *f*, *g*, *o*, Polychrome monkey-head dipper (?) handles, looking into dipper; *h*, modeled jaguar head (mandible broken off, placed in approximate position for photographing); *j*, *m*, San Marcos mold-made type; *k*, *l*, *n*, aberrant types; *p*, Lirios type fragment (hand holding dog's (?) head).

PLATE 39

Miscellaneous figurine types (purchase collection). *a* to *l*, *n*, *t*, Tres Zapotes hand-made type: *a*, *c*, *i*, *l*, subtype A; *b*, subtype B; *j*, *l*, A variants; *f*, AF hybrid; *j*, subtype D; *k*, AFD hybrid; *n*, monkey; *t*, E variant. *m*, Aberrant type (Central Veracruz?); *o* to *r*, aberrant (Soncautla complex?); *s*, aberrant; *u*, San Marcos mold-made; *v*, monkey.

PLATE 40

Miscellaneous figurine types, etc. (purchase collection). *a* to *d*, Vertical modeled lugs; *e*, monkey-head dipper (?) handle; *f*, *g*, arms of large San Marcos type figurine; *h*, jaguar head; *i*, punctate variant appliquéd on olla fragment; *j*, large Tres Zapotes type as effigy jar; *k*, vertical modeled lug (?); *l*, small Lirios type; *m*, Tres Zapotes subtype A variant; *n*, Lirios type, as vessel ornament; *o* to *q*, aberrant types; *r*, San Marcos mold-made.

PLATE 41

Miscellaneous figurines and seals (purchase collection). *a* to *w*, San Marcos mold-made type (*a*, *b*, *c*, ocarinas; *d*, *f* to *j*, *n*, whistles; *e*, flute ornament; *l*, *m*, *o*, *p*, plain hand-made whistles of same ware as mold-made ones; *q* to *v*, mold-made figurines; *w*, jointed leg of jointed figurine); *x* to *ff*, seals (*x*, *y*, *z*, *cc* to *ff*, stemmed flat seals; *aa*, *bb*, cylindrical seal fragments).

PLATE 42

Miscellaneous figurines from trench 10. *a*, Vertical modeled lug; *b*, ocarina with mold-made ornament; *c* to *g*, *l* to *n*, San Marcos type mold-made forms; *h*, fragment of Lirios figurine foot, red painted; *i*, Tres Zapotes subtype E variant; *j*, A variant; *k*, flute fragment; *p*, Tres Zapotes subtype A variant with monkey head; *q*, modeled tab of Brown ware flaring bowl; *r*, Black ware effigy fragment; *s*, Black ware effigy vessel, subtype E face; *t*, stemmed flat seal. *a* to *n*, black topsoil; *o*, *q*, *s*, *t*, brown mix; *r*, midden layer.

PLATE 43

Trench 16 figurines. *a* to *c*, Aberrant types (Soncautla complex?); *d*, seal; *e*, Tres Zapotes subtype E; *f*, *g*, "loom weights"; *h*, mold-made spindle whorl; *i*, San Marcos mold-made; *j*, Tres Zapotes subtype E variant (hollow); *k*, Lirios type; *l*, modeled type of flaring bowl, Black ware; *m*, Tres Zapotes subtype A; *n*, Tres Zapotes type whistle, asphalt painted; *o*, Tres Zapotes subtype E; Tres Zapotes subtype A variant. *a* to *h*, *n*, Lot A; *i* to *m*, Lot C; *o*, *p*, Lot D.

PLATE 44

Miscellaneous Tres Zapotes hand-made figurines. Trench 22. *a*, *b*, *d* to *f*, *t*, Subtype E variants; *c*, *g*, *r*, *w* to *y*, A variants; *h*, *i*, *q*, *s*, *u*, F variants; *j*, *k*, B variants; *l* to *p*, D variants; *v*, C variant.

PLATE 45

Miscellaneous figurine types, mostly Tres Zapotes. Trench 22. *a*, Black ware (frog) effigy vessel; *b*, *c*, "loom weights"; *d*, reptile; *e* to *g*, *j*, *l*, *p*, subtype D; *h*, *v*, jaguars; *i*, E variants; *m*, *q*, *t*, F variants; *n*, *r*, A variants; *o*, *s*, *u*, aberrant form; *w*, variant flat modeled torso, with long hair down back; *x* to *aa*, variant flat modeled bodies.

PLATE 46

Miscellaneous figurine types. Trench 23. *a*, *b*, *f*, Foreign (*a*, *b*, Central Veracruz, *f*, Huasteca) types; *c*, aberrant type; *d*, San Marcos mold-made type; *g* to *l*, Tres Zapotes hand-made type (*g* to *i*, *k*, subtype A; *j*, B; *l*, E variant).

PLATE 47

Miscellaneous figurine, etc., types. Trench 24. *a* to *g*, *k*, *l*, San Marcos mold-made type (*c* is a flute ornament); *h*, foreign (Central Veracruz?) type; *i*, mold-made spindle whorl; *j*, flute fragment; *l*, arm of jointed figurine; *m*, stemmed flat seal; *n*, Carved ware sherd; *o*, *p*, *v*, Lirios type fragments; *q* to *u*, Tres Zapotes hand-made type (*q*, subtype F; *r*, D; *t*, *u*, A); *w*, *x*, vertical modeled lugs; *y*, candelero.

PLATE 48

San Marcos type mold-made figurines. Trench 23, cache.

PLATE 49

San Marcos type figurines, profile and front views. Trench 23, cache.

PLATE 50

San Marcos and foreign types of mold-made figurines, and perforated disks. Trench 23, cache.

PLATE 51

San Marcos-Lirios hybrid type figurines. Trench 23, cache.

PLATE 52

Compound figurine, Lirios type. Trench 23, cache. *a*, Compound figurine, assembled; *b*, compound figurine, assembled, profile; *c*, mask; *d*, body.

PLATE 53

Aberrant type figurines, heads and bodies in suggested association. Trench 23, cache.

PLATE 54

Profile of aberrant type figurines shown in plate 53.

PLATE 55

Lirios type modeled incensario lid with vertical flanges, front and profile. Trench 20.

PLATE 56

Lirios type modeled figurines. Trench 20. *a* was attached to a vessel rim; *c* and *e* were incensario lids.

PLATE 57

Profile of Lirios type modeled figurines shown in plate 56.

PLATE 58

Lirios type modeled figurines. Trench 20. *e* and *f* are bodies.

PLATE 59

Profile of Lirios type modeled figurines shown in plate 58.

PLATE 60

Lirios type modeled figurines. *b*, Slightly aberrant type. Trench 20.

PLATE 61

Lirios modeled type figurines. Trench 20. Note that *c* and *d* are very similar, but not identical. *f*, Note "Totonacoid" mouth.

PLATE 62

Miscellaneous figurines from trench 20. *a*, *b*, *e*, *f*, *i*, *j*, Lirios modeled type; *c*, figurine leg of same ware as trench 23 cache aberrant (nightjar and jaguar) forms, plates 56 and 57; *d*, vertical modeled lug (?), *g* and *h*, San Marcos mold-made type.

PLATE 63

Adornos, arms, hands, and legs of Lirios type modeled figurines. Trench 20.

PLATE 64

Decorated vertical flange of Lirios type incensario lid (1939 collection).

PLATE 65

Miscellaneous objects of clay. *a* to *r*, Mold-made spindle whorls, "loom weights," and spindle-whorl molds (purchase collection). *s*, *v*, Tres Zapotes hand-made figurine; *t*, *u*, Soncautla spindle whorls (trench 10).

APPENDIX A

SHERD DISTRIBUTIONS IN THE 1940 TRENCHES

THE STRATITESTS

The salient facts of the sherd distributions in the stratigraphic trenches (Nos. 1, 13, 19, 26) have been presented in the main body of the report. Detailed tabulations, showing determinable vessel forms, are given here (tables 1–4). Since the major trends have already been discussed, there is little to point out here. The vessel-shape counts are based on the pretty certainly determinable pieces only. Errors are probably for the most part on the side of conservatism. The sampling from any one trench is too small and spotty to be conclusive, but taken together the four stratitests reveal a clean-cut pattern.

TABLE 1.—*Depth distribution of wares and vessel shapes in trench 1*

Ware	Distribution at depth of (inches)—											
	0–12	12–18	18–24	24–30	30–36	36–42	42–48	48–54	54–60	60–66	66–72	72+
Polychrome:												
Cream-white slip:												
Bowls:												
Flat base, flaring side	34	8	31	12	5	3	4	5	2		1	
Open curved side	1	1	7	3	2	1		1				
Sharply incurved side	24	9	20	18	5	9	3	8	2			
Spouted vessels	1		3	2		1?						
Ollas:												
Flared beveled rim			3	1		3	1	1				
Stamped face on neck					1							
Vase with annular base			1?									
Miniature vessels: Ollas					1							
Cascabel legs	2	1	2			1						
Hollow slab legs		1										
Round solid legs	1			1	1							
Total sherds[1]	524	218	491	189	77	91	46	42	8	5	5?	3
Buff slip:												
Bowls:												
Flat base, flaring side	3	3	8		1	1	3	3				
Open curved side	3	2	13	5	5	3	1	2?				1
Sharply incurved side	2		1	5								
Spouted vessels	1			1?		1	1					
Ollas: Flared beveled rim			2	1	1	1		1				
Gadrooned vessels	1		1					1				
Cascabel legs	1	2	4					1				
Hollow slab legs				2								
Total sherds[1]	24	24	122	87	44	43	22	41	2	3	0	2

See footnotes at end of table.

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TABLE 1.—*Depth distribution of wares and vessel shapes in trench 1*—Continued

Ware	Distribution at depth of (inches)—											
	0-12	12-18	18-24	24-30	30-36	36-42	42-48	48-54	54-60	60-66	66-72	72+
Polychrome—Con.												
Gray slip: [2]												
Bowls:												
Flat base, flaring side	7	3	6	2	------	2	2	1	1	------	------	------
Open curved side	3	4	3	2	1	------	------	2	------	------	------	------
Sharply incurved side	10	3	10	1	------	2	1	2	------	------	------	------
Spouted vessels	------	------	------	1	------	------	------	2?	------	------	------	------
Ollas: Flared beveled rim	------	------	1	------	------	------	------	------	------	------	------	------
Gadrooned vessels	------	1	1	------	------	------	------	------	------	------	------	------
Cascabel legs	2	------	3	1	1	------	------	------	------	------	------	------
Total sherds [1]	104	23	115	47	32	28	12	22	3	1	------	------
Orange slip:												
Bowls:												
Flat base, flaring side	3	1	4	------	------	------	1	1	------	------	------	------
Open curved side	2	1	3	------	2	------	------	------	------	------	------	------
Sharply incurved side	------	1	6	1	------	------	------	2	2	2	------	------
Spouted vessels	1	------	------	------	------	------	------	------	------	------	------	------
Ollas: Flared beveled rim	------	------	1	3	2	1	2	6	1	------	------	1
Total sherds [1]	22	19	166	95	25	23	18	38	9	3	0	
Brown ware:												
Brown slip:												
Bowls:												
Flat base, flaring side	21	10	33	15	11	14	17	31	14	38	20	42
Wide everted rim	2	------	5	2	3	1	4	7	5	12	9	20
Modeled tab	------	------	------	------	------	------	------	------	------	1	------	------
Unslipped base	1	2	3	2	------	2	2	------	------	------	------	------
Solid slab feet	1	------	------	------	------	------	------	------	------	------	------	------
Open curved side	1	------	8	------	6	2	3	2	------	1	1	5
Incurved, tapered everted rim	------	------	9	8	2	1	9	12	4	12	9	23
Incurved, short vertical rim	------	------	4	3	3	5	12	6	2	11	4	5
Composite silhouette	1	------	2?	1	------	2	2	3	1	2	2	2
Dishes:												
Composite silhouette	------	1	2	2	1?	1	3	------	4	------	------	6
Spouted vessels:												
Unsupported spout	------	------	2	2	------	------	1	------	1	------	------	------
Supported spout	------	------	------	------	1	------	------	------	------	------	------	------
Jars:												
Concave to vertical side	------	------	------	1	------	------	------	1	------	2	------	3
Composite silhouette	------	1?	------	------	------	------	------	------	------	------	1	------
Effigy jar with punctate features	------	------	------	------	------	------	------	------	1	------	------	------
Urns:												
Thick-rimmed	------	------	2	1	------	------	2	1	1	2	1	2
Composite silhouette	------	------	------	1	1?	1?	2	2	1?	------	------	------
Ollas:												
Simple neck	------	------	5	5	2	5	2	15	11	28	15	24
Complex neck	1	------	4	5	3	3	4	9	6	8	3	8
Punctate face on neck	1	------	1	------	------	------	------	1	5	4	2	1
Miniature dishes	------	------	1	1	------	------	2	------	2	4	2	1
Cascabel legs	------	?1	------	------	------	------	------	------	------	2	------	------
Heavy annular bases	------	------	------	1	1	------	------	------	------	2	1	------
Total sherds [1]	212	117	262	318	184	226	321	415	359	773	331	586
Red slip:												
Bowls:												
Flat base, flaring side	------	------	5	6	1	2	2	3	1	1	4	2
Wide everted rim	------	------	------	------	------	------	------	------	------	------	------	1
Open curved side	3	2	5	2	------	1	------	2	------	------	------	------
Incurved, tapered everted rim	------	------	------	1	------	------	------	1	------	------	1	------
Jars: Concave to vertical side	------	------	------	------	------	------	------	------	------	------	------	1

See footnotes at end of table.

TABLE 1.—*Depth distribution of wares and vessel shapes in trench 1*—Continued

Ware	Distribution at depth of (inches)—											
	0–12	12–18	18–24	24–30	30–36	36–42	42–48	48–54	54–60	60–66	66–72	73+
Brown ware—Continued.												
Red slip—Continued.												
Ollas:												
Simple neck										3	5	4
Complex neck												2
Punctate face on neck								1	1	1	1?	
Total sherds [1]	10	5	42	32	4	9	9	18	5	29	22	61
White slip:												
Bowls:												
Flat base, flaring side		1	1		1		2	1	1	1	1	
Wide everted rim				1		1		1	1	2		4
Open curved side	1		2	1		1	3	2			1	
Incurved, tapered everted rim							1			1		1
Composite silhouette							1					
Dishes: Composite silhouette				1				3	1			2
Spouted vessels: Unsupported spout	1			1				1				
Ollas: Simple neck			2			3				1		
Cascabel legs	1	1										
Red-and-White Bichrome										1	1	1
Total sherds [1]	4	5	10	11	5	21	14	21	20	13	9	41
Black ware: [3]												
Bowls:												
Flat base, flaring rim	4	3	6	3	2	4	7	3	3	4	3	6
Incurved side						1						1
Open curved side	2		4	3	1	3	4	1				1
Composite silhouette	1		2	2		2		6	4	6	6	9
Dishes: Composite silhouette						1						1
Spouted vessels			1						1			
Jars:												
Composite silhouette								2?	2	4		3
Concave side			1	2						2	1	3
Vertical side			2		1?	1?		2		1	1	
Flanged rim				1			1			1		
Ollas		1	1	1		1	1		1	1		
Effigy jars							1					
Total sherds [1]	38	40	131	146	72	104	150	186	110	147	51	181
White-rimmed Black	24	9	36	71	72	47	89	121	60	149	55	62
Brown-rimmed Black	1	0	10	3	3	4	5	22	9	17	5	11
Incensario ware:												
Loop handled	2	1	10	2	2	1	3	2	2?			
Bossed	4	1	4	0	1	1	1					
Annular base	1	0	2	1	1	2	1?					
"Frying pan" type							1					
Total sherds [1]	18	7	25	9	9	8	12	11	2?			
Comales	19	2	47	36	9	9	4	3				
Unslipped Ollas:												
Complex necks			2	3	1	4	1	2	3			2
Simple necks	7		19	8	5	3	8	19	10	37	20	16
Punctate face necks			1		1	1						
Slanting lugs	6	1	6		1		1					
Flared rim, with external roll	1	1	1	6	2	3						
Carved ware		[4] 1										

[1] Totals include unidentified sherds.
[3] A small amount of Smoked Black is included.
[3] Includes Mottled White; but White-rimmed and Brown-rimmed forms are not included.
[4] One sherd from same level in nearby trench 2.

TABLE 2.—*Depth distribution of wares and vessel shapes in trench 13*

Ware	Distribution at depth of (inches)—					
	0–12	12–24	24–36	36–48	48–60	60+
Polychrome:						
Cream-white slip:						
Bowls:						
Flat base, flaring side	5				1	5
Sharply incurved side	2					
Spouted vessels	1		1		1	
Total sherds [1]	46	26	17	3	12	10
Buff slip:						
Bowls:						
Open curved side	2					
Ollas: Flared beveled rim		1				
Gadrooned vessels [2]						
Cascabel legs	1	1				
Round solid legs		1				
Total sherds [1]	13	17	6			
Gray slip:						
Bowls:						
Flat base, flaring side	1	1	2			
Open curved side	1					
Ollas: Flared beveled rim		1				
Total sherds [1]	13	25	11	1		
Orange slip:						
Bowls: Open curved side	1	1			1	
Spouted vessels			1			
Total sherds [1]	13	14	6	4	7	
Smoked Black:						
Bowls: Open curved side		1				
Total sherds [1]	3	1	1			
Brown ware:						
Brown slip:						
Bowls:						
Flat base, flaring side	11	31	35	41	24	14
Wide everted rim	6	9	12	14	8	5
Open curved side		3	3		2	4
Incurved, tapered everted rim	1	8	7	13	8	5
Incurved, short vertical rim	2	8	9	5	6	3
Composite silhouette			3	5	6	4
Dishes:						
Simple silhouette			2	2	4	7
Composite silhouette		5	6	2	8	8
Spouted vessels:						
Unsupported spout	1	2	1			?1
Supported spout		?1		?1		
Jars:						
Concave to vertical side	1	1	3	1	?1	
Composite silhouette		1				
Urns: Thick-rimmed		1	1	1	1	
Ollas:						
Simple neck	2	8	13	18	10	5
Complex neck		3	5	7	8	4
Punctate face on neck			1			
Miniature dishes		4	7	3	1	1
Cascabel legs	1		1			
Heavy annular bases				1	3	1
Red linear painting		1		1		1
White linear painting					1	2
Total sherds [1]	141	522	605	630	542	337
Red slip:						
Bowls:						
Flat base, flaring side			1	2	1	1
Open curved side					1	1
Incurved, short vertical rim						1
Ollas: Simple neck		1	2	5	4	2
Total sherds [1]	3	18	7	27	18	10
White slip:						
Bowls:						
Flat base, flaring side	2	1		2	4	
Open curved side	1	3	1		6	
Incurved, tapered everted rim				2	5	
Incurved, short vertical rim				1		2
Dishes:						
Simple silhouette		1			2	
Composite silhouette			(?)1	1	1	1
Spouted vessels:						
Unsupported spout			3	1	(?)1	
Supported spout					1	
Ollas: Simple neck	1	2	2		1	

See footnotes at end of table.

TABLE 2.—*Depth distribution of wares and vessel shapes in trench 13*—Continued

Ware	Distribution at depth of (inches)—					
	0–12	12–24	24–36	36–48	48–60	60+
Brown ware—Continued.						
White slip—Continued.						
Cascabel legs				1		
Total sherds [1]	14	38	20	30	48	24
Red-and-White Bichrome:						
Bowls: Composite silhouette				1	1	
Total sherds [1]				1	2	1
Black ware:						
Bowls:						
Flat base, flaring rim		11	3	6	8	4
Incurved side		1		1		3
Curved side	1	3		3	4	4
Composite silhouette		3			2	2
Dishes:						
Composite silhouette	1	5	6	6		1
Simple silhouette			1			1
Jars:						
Composite silhouette	1?	1	3	2	2	
Concave side			2		1	
Vertical side		2				
Flanged rim			1		1	1
Ollas		1	2	2	4	3
Total sherds [1]	108	335	262	202	273	114
White-rimmed Black	29	115	52	21	37	52
Brown-rimmed Black		15	6	13	10	8
Incensario ware:						
Loop handled		1				
Total sherds [1]	2	2				
Comales	2	1				
Unslipped Ollas:						
Complex necks	2	2	5	2		1
Simple necks	5	10	15	21	4	7
Punctate face necks		2			1?	

[1] Totals include unidentified sherds.
[2] One small gadrooned vessel from nearby test pit, trench 8.

TABLE 3.—*Depth distribution of wares and vessel shapes in trench 19*

Ware	Distribution at depth of (inches)—							
	0–12	12–24	24–36	36–48	48–60	60–72	72–84	84+
Polychrome:								
Cream-white slip:								
Bowls:								
Flat base, flaring side	21	14	5	5	4	2	1?	
Open curved side	5	2	1	1				
Sharply incurved side	2	1	3	1	1		1	
Spouted vessels			1					
Ollas: Flared beveled rim	15	3	1					
Cascabel legs	1			2				
Hollow slab legs	1	2						
Total sherds [1]	231	112	71	42	32	7	3	0
Buff slip:								
Bowls:								
Flat base, flaring side	3	2	1					
Open curved side	3		1	3				
Spouted vessels	1							
Ollas:								
Flared beveled rim	3							
Stamped face on neck				1?				
Pot lids				1				
Cascabel legs	1							
Hollow slab legs		1						
Total sherds [1]	34	10	8	9				
Gray slip:								
Bowls:								
Flat base, flaring side	6	4	2	2	1			
Open curved side	3	3						
Sharply incurved side	9	13	1		1	1		
Cascabel legs	1							
Total sherds [1]	57	65	13	5		1	1	

See footnote at end of table.

TABLE 3.—*Depth distribution of wares and vessel shapes in trench 19*—Continued

Ware	Distribution at depth of (inches)—							
	0-12	12-24	24-36	36-48	48-60	60-72	72-84	84—
Polychrome—Continued.								
Orange slip:								
Bowls:								
Flat base, flaring side	4		1	2	1			
Open curved side	2	1	2		1			
Ollas: Flared beveled rim	3							
Total sherds [1]	30	2	8	9	4			
Smoked Black:								
Bowls:								
Flat base, flaring side	3	2						
Open curved side	2	1		1				
Ollas: Flared beveled rim	1?							
Total sherds [1]	16	13	1	2				
Brown ware:								
Brown slip:								
Bowls:								
Flat base, flaring side	20	7	7	9	20	28	30	27
Wide everted rim	2	4	2	6	5	14	13	6
Open curved side	8	2		3		5	4	7
Incurved, tapered everted rim	5	10	8	5	14	14	24	28
Incurved, short vertical rim	1	3	3	1	4	5	9	9
Composite silhouette	2	3		1	3	8	9	11
Dishes:								
Simple silhouette		1	1		1	4	2	
Composite silhouette	1	2		2		6	5	9
Spouted vessels: Unsupported spout					2	1?		
Jars:								
Concave to vertical side			1	1		3	2	1
Composite silhouette							1?	1
Urns:								
Thick-rimmed	1		1	1	1	2	3	2
Composite silhouette				1?	2	1		1?
Ollas:								
Simple neck	5	7	4	10	9	19	26	31
Complex neck		2	1	3	10	6	11	10
Punctate face on neck						1	1	
Low annular ring base							1	1
Heavy annular bases							1	3
Three-element twisted loop handle						1		
White painted linear designs				1		2	3	1
Brown painted linear designs			3		1	3		
Total sherds [1]	210	134	87	80	310	511	653	598
Red slip:								
Bowls:								
Flat base, flaring side	7	4		1	2		1	1
Wide everted rim					1			
Open curved side	3	1	1	1	1		1	
Incurved, short vertical rim					1	1	2	
Jars: Concave to vertical side				1	1	1	1	
Ollas:								
Simple neck			1		2	1	3	6
Complex neck		1	1			1	2	2
Punctate face on neck						1		2
Total sherds [1]	22	14	7	6	16	28	19	52
White slip:								
Bowls:								
Flat base, flaring side		1	2	2	1			1
Wide everted rim				1				
Open curved side	1							1
Incurved, short vertical rim		2						
Composite silhouette					1?	2		1
Dishes:								
Simple silhouette			1				2	
Composite silhouette					2		2	
Spouted vessels: Unsupported spout								1
Ollas:								
Simple neck	2				1			
Complex neck				3				
Total sherds [1]	10	16	10	12	12	13	21	23
Black ware:								
Bowls:								
Flat base, flaring rim	6	3	4	3	10	17	10	11
Incurved side					1			
Curved side	2	1			4	1		
Composite silhouette	1	1	1			1		4

See footnote at end of table.

TABLE 3.—*Depth distribution of wares and vessel shapes in trench 19*—Continued

Ware	Distribution at depth of (inches)—							
	0–12	12–24	24–36	36–48	48–60	60–72	72–84	84—
Black ware—Continued.								
Dishes:								
Composite silhouette		1		4	1	2	3	4
Simple silhouette		1	1				3	1
Jars:								
Composite silhouette		1	1			3	4	1
Concave side		1			2	1	6	2
Vertical side							3?	1?
Flanged rim			1			2		
Ollas	1			2		3	2	3
Wide bowl rim with modeled tab					1			
Total sherds [1]	62	41	48	36	165	184	180	173
White-rimmed Black	14	6	19	11	47	68	91	61
Brown-rimmed Black	7	4	16	7	17	31	32	21
Incensario ware:								
Loop handled	19	7	1					
Bossed	1		2	1		1		
Annular base	5		1					
Total sherds [1]	51	26	10	2	1	2	1	
Comales	6	10		2	3			
Unslipped Ollas:								
Complex necks			2		2	3	3	6
Simple necks		4	1	2	4	11	21	22
Punctate face necks						2	5	2
Flared rim, with external roll	6	5	2					

[1] Totals include unidentified sherds.

TABLE 4.—*Depth distribution of wares and vessel shapes in trench 26*

Ware	Distribution at depth of (inches)—						
	189–201	201–213	213–225	225–237	237–249	249–261	261+
Polychrome: [1]							
Slip indeterminate	3?			1?	5?		
Brown ware:							
Brown slip:							
Bowls:							
Flat base, flaring side	9	6	8	13	26	11	3
Wide everted rim	5	2	3	6	19	4	1
Open curved side	1				2		
Incurved, tapered everted rim	5	5	6	1	11	6	2
Incurved, short vertical rim	1	1	3		3	3	1
Composite silhouette		1		2	1	4	2
Dishes:							
Simple silhouette					1		
Composite silhouette		1	1		1	2	
Spouted vessels: Unsupported spout		1					
Jars:							
Concave to vertical side			1				
Composite silhouette		2	1		1		
Urns:							
Thick-rimmed			1				
Composite silhouette					1		
Ollas:							
Simple neck	1		3	3	3	5	
Complex neck	1	1		2	4		
Punctate face on neck					1		
Heavy annular bases						1	
Total sherds [2]	87	77	155	117	175	158	51
Red slip:							
Bowls:							
Flat base, flaring side							1
Incurved, short vertical rim						1	
Spouted vessels: Unsupported spout						1	
Ollas: Simple neck				1	2		
Total sherds [2]			1	2	7	4	4

See footnotes at end of table.

TABLE 4.—*Depth distribution of wares and vessel shapes in trench 26*—Continued

Ware	Distribution at depth of (inches)—						
	189–201	201–213	213–225	225–237	237–249	249–261	261+
Brown ware—Continued.							
White slip:							
Bowls:							
Flat base, flaring side				4		1	
Incurved, short vertical rim	1						1
Composite silhouette	1		2		2		2
Spouted vessels: Unsupported spout	1						
Ollas: Simple neck			1		1		
Total sherds [2]	12	2	9	8	9	19	11
Black ware:							
Bowls:							
Flat base, flaring rim	3		3	2	10	3	
Incurved side			1	1	2		
Curved side	2	1					
Composite silhouette		1		3	6	6	1
Dishes: Composite silhouette				2	1		
Jars:							
Composite silhouette	1	1		1	2		
Concave side			2			1	
Ollas		1		1	1	2	1
Effigy jars						1	
Total sherds [2]	37	20	61	37	102	92	12
White-rimmed Black	9	16	21	6	21	19	
Brown-rimmed Black		4	2	2	3	1	
Unslipped Ollas:							
Complex necks		1	1	1	5	1	2
Simple necks	4	6	5	7	30	9	2
Punctate face necks			2	1?			

[1] Identification uncertain; based on paste only.
[2] Totals include unidentified sherds.

TRENCH 10

It will be recalled that trench 10 was begun in order to locate material of the Soncautla complex, and was secondarily made into a stratigraphic section by stripping off various soil layers. The sherds were culled in the field, so that counts cannot be made, but a presence-absence list of principal wares and shapes shows a pattern roughly similar to that of trench 1. Soncautla complex material is not included in the list.

BLACK SURFACE LEVEL

Polychrome ware.—Bowls: Flat base with flaring side, open curved side, sharply incurved side; spouted vessel (supported spout); ollas: vertical neck flared beveled rim; cascabel legs; "handle." All varieties of Polychrome slips present.

Brown ware.—(Few sherds.) Bowls: Flat base with flaring side and wide everted rim, same with unslipped base; ollas: simple necks, complex necks. Small amounts of Red-slipped and White-slipped variants.

Black ware.—(Few sherds.) Bowls: Curved side, composite silhouette (rare); jars: vertical side. A few White-rimmed and Brown-rimmed bowl sherds included.

Incensario ware.—Bossed; annular based fragments.

Comales.—Present.

Unslipped Ollas.—Simple necks; slanting triangular lugs.

Figurines.—Tres Zapotes hand-made types (subtypes A, B, D. E); San Marcos mold-made (numerous).

Miscellaneous.—Mold-made spindle whorls; flute.

YELLOW-BROWN CLAYEY MIX

Polychrome ware.—Bowls: Flat base with flaring side, open curved side, sharply incurved side with heavy rim; supported spout vessels; cascabel legs. All Polychrome slips.

Brown ware.—Bowls: Flat base with flaring side, with everted grooved rims, open curved side, incurved side with tapered everted rim, same with short vertical rim, composite silhouette; spouted vessels (*both* supported and unsupported spouts); jars: concave side (?); urns: composite silhoutte (?); thick-rimmed; ollas: simple necks, complex necks, punctate face on neck; miniature vessels: dishes; spouted vessels with faces on necks. Some Red-slipped, White-slipped variants.

Black ware.—Bowls: Flat base with flaring side, open curved side, composite silhouette; dishes: composite silhouette; spouted vessels (?); jars: vertical side, composite silhouette, flanged rim; effigy jar. White-rimmed bowls common.

Incensario ware.—Loop handled forms.

Comales.—(Few.)

Unslipped Ollas.—Simple necks, complex necks.

Figurines.—Tres Zapotes hand-made (subtypes A, B, D (?), E); San Marcos mold-made (frequent).

Miscellaneous.—Stemmed flat seal.

MIDDEN LAYER

The trench cut but a small segment of this horizon, and a rather scant sampling of sherds was obtained.

Polychrome ware.—(Few sherds only; no determinable shapes.)

Brown ware.—Bowls: Flat base, flaring side, wide everted grooved rims, incurved side tapered everted rim, same with short vertical rim; ollas: simple necks, complex necks. Small amount of White-slipped variant present.

Black ware.—Bowls: Flat base, flaring side, curved side; jars: composite silhouette (?); effigy jars (?). White-rimmed bowls present.

Unslipped Ollas.—Simple necks, complex necks.

Figurines.—Tres Zapotes hand-made (few fragments, indeterminable as to subtype).

It should be noted also that two or three sherds of what appear to be the same Polychrome-Brown ware hybrid ware as that noted in the trench 4 cache occurred in each of the two upper levels.

TRENCH 16

Trench 16, the uncompleted cut into the main mound of Group 3, yielded a rather heterogeneous lot of sherd material. Because of the manner in which the trench was dug, i. e., in a series of steps, it is not possible to correlate any particular level or depth with what appeared to be the two-period construction of the mound. Each step that cut into the dark-colored stepped core (see p. 25) cut through the outer (red clay) layer as well. An attempt was made to segregate the sherds on the basis of excavation dates to give a rough check on differences, or lack of them, in the sherds from the two parts of the mound. The sherds were cataloged in four lots: A, from the first 2 weeks' digging; B, from the second 2 weeks; C, from the next (fifth) week; and D, from the final half week preceding the abandonment of the trench. Theoretically, the later lots should contain successively more of the material from the mound core, and less of that from the outer cap. If the two parts of the mound were built at different times, there should be some differences in the wares represented. The results seem to bear out this view that there were two periods of construction. The gross differences between lot A and lot D are considerable. The latter is, as a matter of fact, the only one completely from the inner core of the mound. Lots B and C were about the same, and equally mixed. They are combined in the tabulation.

LOT A

Polychrome ware.—(Abundant.) Bowls: Flat base flaring side, open curved side, sharply incurved side heavy rim; ollas: vertical necks flaring beveled rim. All Polychrome slips present.

Brown ware.—Bowls: Flat base flaring side, incurved side tapered everted rim, same with short vertical rim; dishes: composite silhouette (?); urns: thick-rimmed; ollas: simple necks, complex necks. Small amounts of Red-slipped and White-slipped variants.

Black ware.—Bowls: Flat base flaring side, composite silhouette; jars: composite silhouette (?); ollas: complex necks. White-rimmed bowls present.

Incensario ware.—(Abundant.) Loop handled type; bossed type; annular bases.

Unslipped Ollas.—Simple necks, complex necks.

Soncautla complex.—Loop legged "chile grinders"; fine-line incised ware (rare); strap handles.

Figurines.—Tres Zapotes hand-made (subtypes A, E); San Marcos mold-made (few); Soncautla type (two fragments).

Miscellaneous.—Stemmed flat seal.

LOTS B AND C

Polychrome ware.—(Moderate amount.) Bowls: Flat base flaring side, open curved side, sharply incurved side, heavy rim; supported-spout vessel; cascabel legs. Cream-white, Buff, Orange, and Gray slips present.

Brown ware.—Bowls: Flat base flaring side, incurved side tapered rim, same short vertical rim, composite silhouette (?); ollas: simple necks; miniature vessels: dishes. Red-slipped, White-slipped Red-and-White Bichrome variants present.

Black ware.—Bowls: Flat base flaring side, curved side, composite silhouette; ollas: complex necks. White-rimmed bowls present.

Incensario ware.—(Few.) Loop handled; bossed; annular base.

Comales.—(Few.)

Unslipped Ollas.—Simple necks, complex necks, punctate face on neck.

Figurines.—Tres Zapotes hand-made (subtypes A, D, E); San Marcos mold-made (one fragment); Lirios type.

LOT D

(Small sampling only)

Brown ware.—Bowls: Flat base, flaring side, incurved side, tapered everted rim; jars: concave side; ollas: simple necks, complex necks. Red-slipped and White-slipped variants present.

Black ware.—Bowls: Curved side, composite silhouette.

Unslipped Ollas.—Simple necks, complex necks.

Figurines.—Tres Zapotes hand-made (subtypes A, E).

The contrast between Lots A and D is most apparent. Lot A consists quite obviously of predominantly Upper pottery types, whereas Lot D would fit into the lower or Middle series. It seems legitimate to conclude that the inner portion, that represented by Lot D, and the outer covering, represent two different phases of building. The core of the pyramid would presumably have been erected in Middle times or during the very early part of the Upper phase. The outer covering must have been put on while the Upper phase was well advanced, to judge by the quantity of Upper wares incorporated into it.

The most surprising part of the mound content is the Soncautla complex material occurring in Lot A. These wares are not represented by complete vessels but by broken fragments. No actual burials were encountered. So presumably these sherds come from a superficial occupational level. Since, unfortunately, the sherds from

the trench were not segregated according to either step or level, it is impossible to determine from just what part these Soncautla sherds came. One can scarcely imagine even a thin occupational layer on the steep side of the mound. It seems more logical to assume that these sherds came from the gently sloping platformlike base of the mound through which the wing of the main trench was cut.

TRENCH 20

The trench 20 material is a field-culled lot of sherds from the horizon containing the Lirios type figurines elsewhere described and discussed.

Polychrome ware.—Bowls: Flat base with flaring side, open curved side, sharply incurved side; spouted vessel (supported spout); cascabel legs; small solid ball feet; miniature ollas. All varieties of Polychrome slips present.

Brown ware.—(Few sherds.) Bowls: flaring side, with unslipped base.

Black ware.—(Very few sherds.) White-rimmed bowls.

Incensario ware.—Three-handled types; bossed types; annular based types; modeled incensario covers.

Comales.—(Some.)

Unslipped Ollas.—Slanting triangular lugs.

Figurines.—Tres Zapotes hand-made (subtype A); San Marcos mold-made (few); Lírios modeled (many).

TRENCH 21

Polychrome ware.—Bowls: Flat base with flaring side, sharply incurved side, open curved side; cascabel legs. All varieties of Polychrome except Smoked Black present.

Brown ware.—Bowls: Flat base with flaring side, unslipped base, incurved side with short vertical rim; strongly flared olla neck. Small amounts of Red-slipped, White-slipped variants.

Black ware.—Bowls: Flaring side, composite silhouette (few). White-rimmed bowls (few).

Incensario ware.—Three-handled types; bossed types (many); annular based types.

Comales.—(Present.)

Unslipped Ollas.—Widely flaring necks with externally rolled rims; slanting triangular lugs.

Figurines.—Lirios modeled type.

TRENCH 24

From the mound material cut by this trench came the best preserved lot of Polychrome sherds obtained in the 1940 excavations.

A test at one end of the cut encountered the underlying volcanic ash, and the culture-bearing horizon below.

MOUND STRUCTURE

Polychrome ware.—Bowls: Flat base with flaring side, open curved side; sharply incurved side; spouted vessel (supported spout); cascabel legs; cylindrical feet; solid ball feet. All varieties of Polychrome slip present in abundance.

Brown ware.—Bowls: Flaring side with unslipped base and solid slab legs; ollas: widely flaring necks with externally rolled rims. Red-slipped forms present; White-slipped, few.

Black ware.—(Few sherds only.)

Incensario ware.—Three-handled types; bossed types (few); annular based types.

Comales.—(Many.)

Unslipped Ollas.—Simple necks; widely flaring necks with externally rolled rims; slanting triangular lugs.

Vertical modeled lugs.—(Present.)

Figurines.—Tres Zapotes hand-made types (subtypes A, C, D); San Marcos mold-made type (many); Lirios modeled type (few).

Candeleros.—(Present.)

SUB-ASH HORIZON

The entire lot of material from this horizon was saved. The following tabulation gives the ware frequencies, but not vessel shapes. For vessel shapes of this horizon, see trench 26 tabulation.

Brown ware.—(Including 6 White-slipped.) 71 sherds.

Black ware.—(Including 8 White-rimmed.) 57 sherds.

Unslipped Ollas.—23 sherds.

APPENDIX B

BURIALS

The relevant data on the various types of burial have been given in the description of trenches. There remains only the task of summarizing this material and correlating it with the divisions of the ceramic column.

The most distinct burial complex typologically, and chronologically as well, was that represented by the intrusive cremations. Quantities of pottery vessels, some utilitarian, some surely special mortuary or ceremonial pieces, were put in the intrusive pits with the cremated remains (sometimes in the case of children the bodies were not cremated).

Both interment and urn burial occurred in the Upper and Middle horizons. The interments seem to have been flexed, ordinarily, for the areas of decomposed bone are seldom large. It is possible, of course, that they represent secondary interments. One secondary burial assignable to the Middle Tres Zapotes phase was found (trench 1). Other Lower burials were in too bad a shape for their position to be identified. Noteworthy is the niggardly amount of grave furniture in all phases of the Tres Zapotes culture, even as compared to that of the Soncautla horizon. (The isolated skull found with the rich cache in trench 23 is as likely to have been a trophy head as a proper burial.)

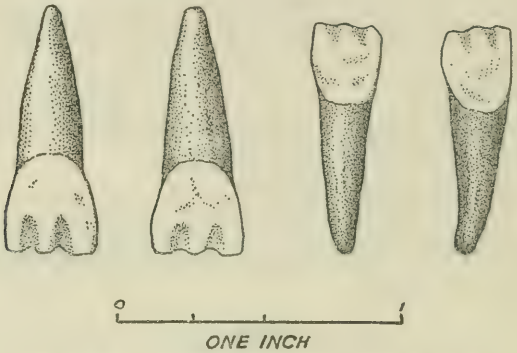
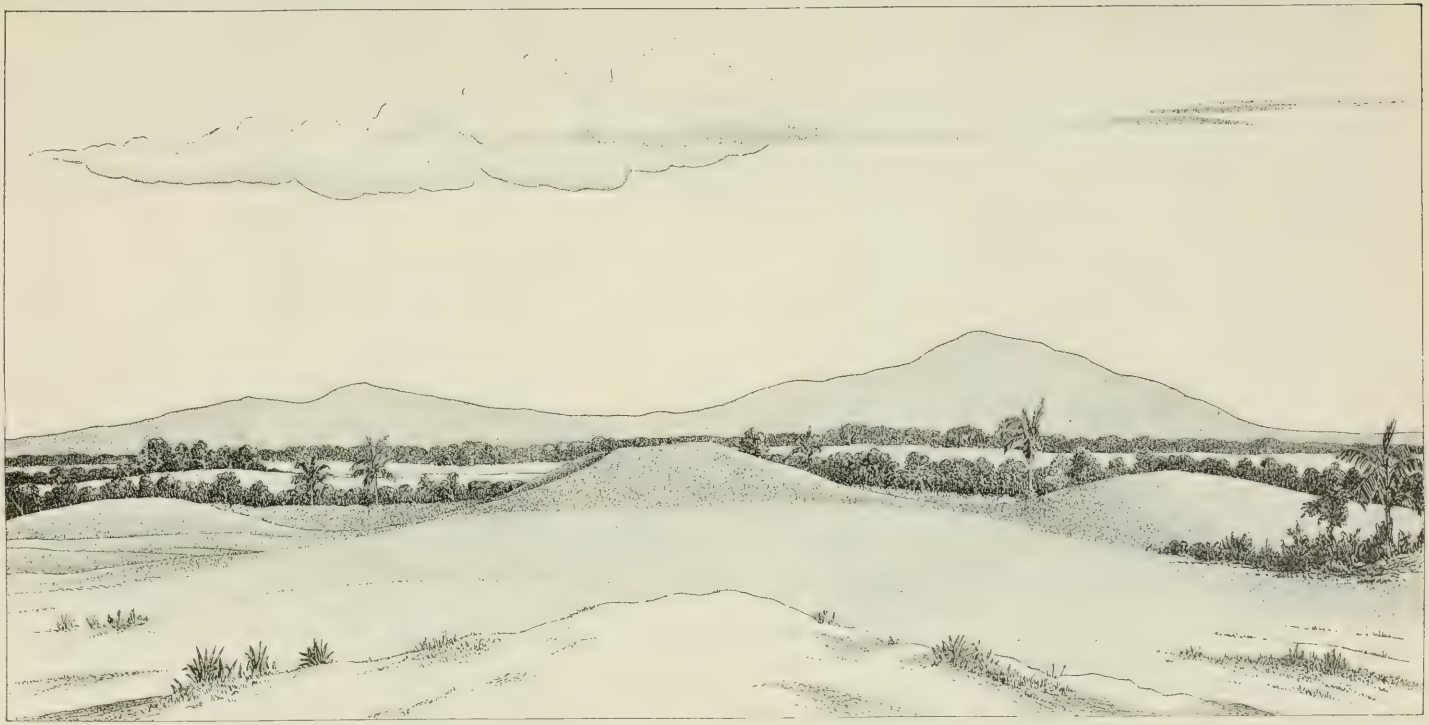
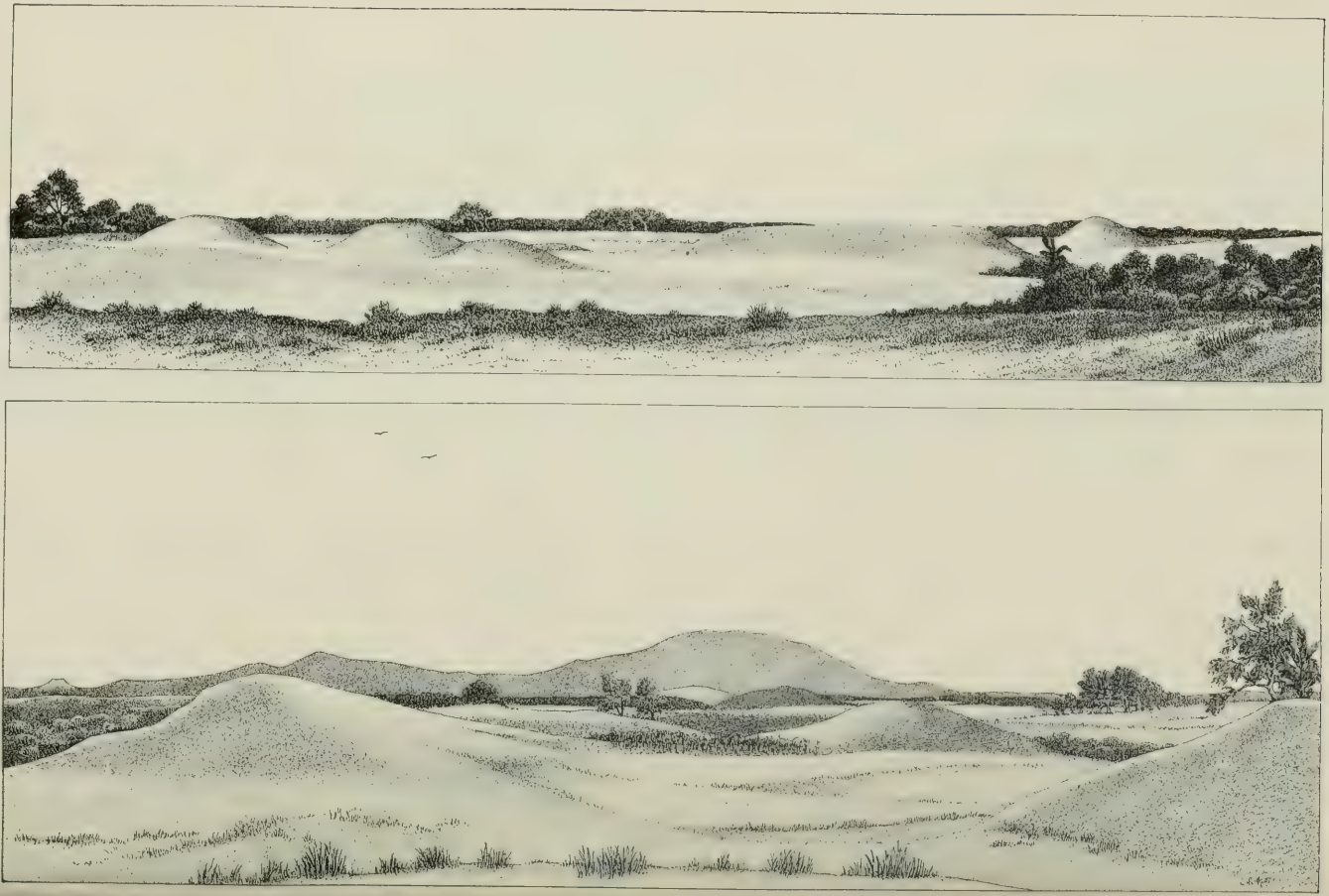


FIGURE 46.—Decorated teeth from trench 24 burial.

Owing to the advanced decomposition of the bone, it is not possible to say anything about the physical type or types represented. The most that can be done is to point out the absence of a cultural, not a physical feature. In but one of all the burials observed were filed or decorated teeth noted (fig. 46). This one case was a very badly decomposed burial in trench 24, in which the incisors each had two little semicircular nocks in their biting edges (fig. 46). The burial is probably assignable to the Upper phase.



VIEW OF TRES ZAPOTES MOUND GROUP.
(Drawing by Edwin G. Cassedy.)
(For explanation, see page 126.)

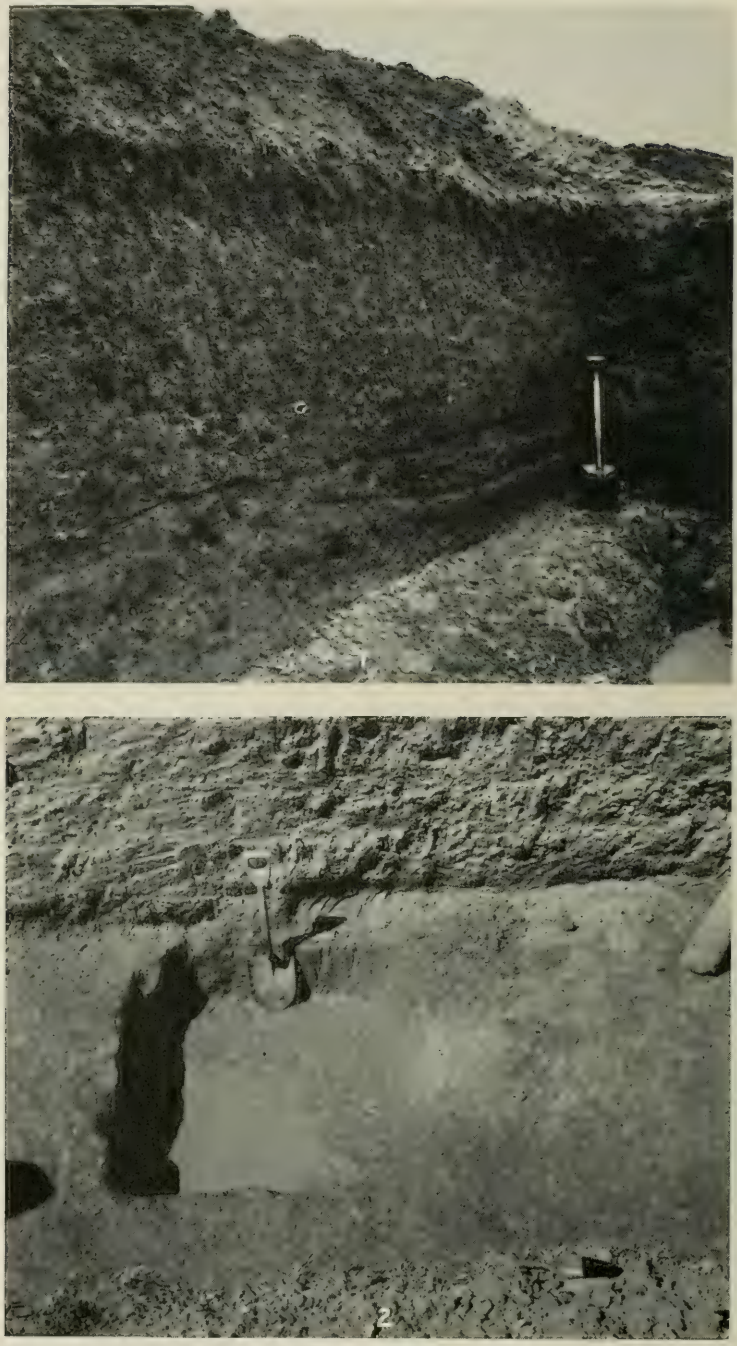


TWO VIEWS OF TRES ZAPOTES MOUND GROUPS.

1. View to north from main mound, Group 3. Note broken character of country.

2. Looking east toward Tuxtla Mountain from main mound, Group 3.

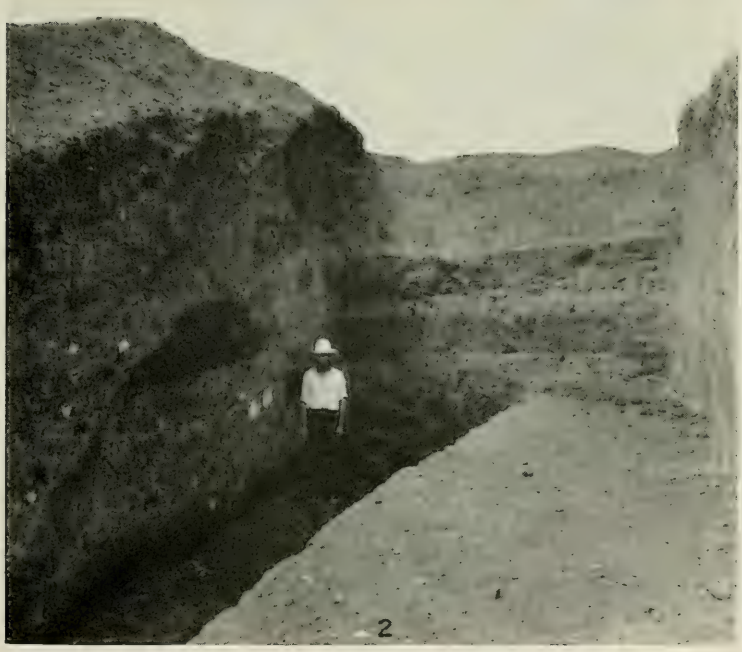
GENERAL VIEWS OF LAND FORMS IN TRES ZAPOTES REGION.



TRENCHES.

1, Trench 1. 2, Trench 13.

(For explanation, see page 127.)



TRENCHES.

1, Trench 19. 2, Trench 22.

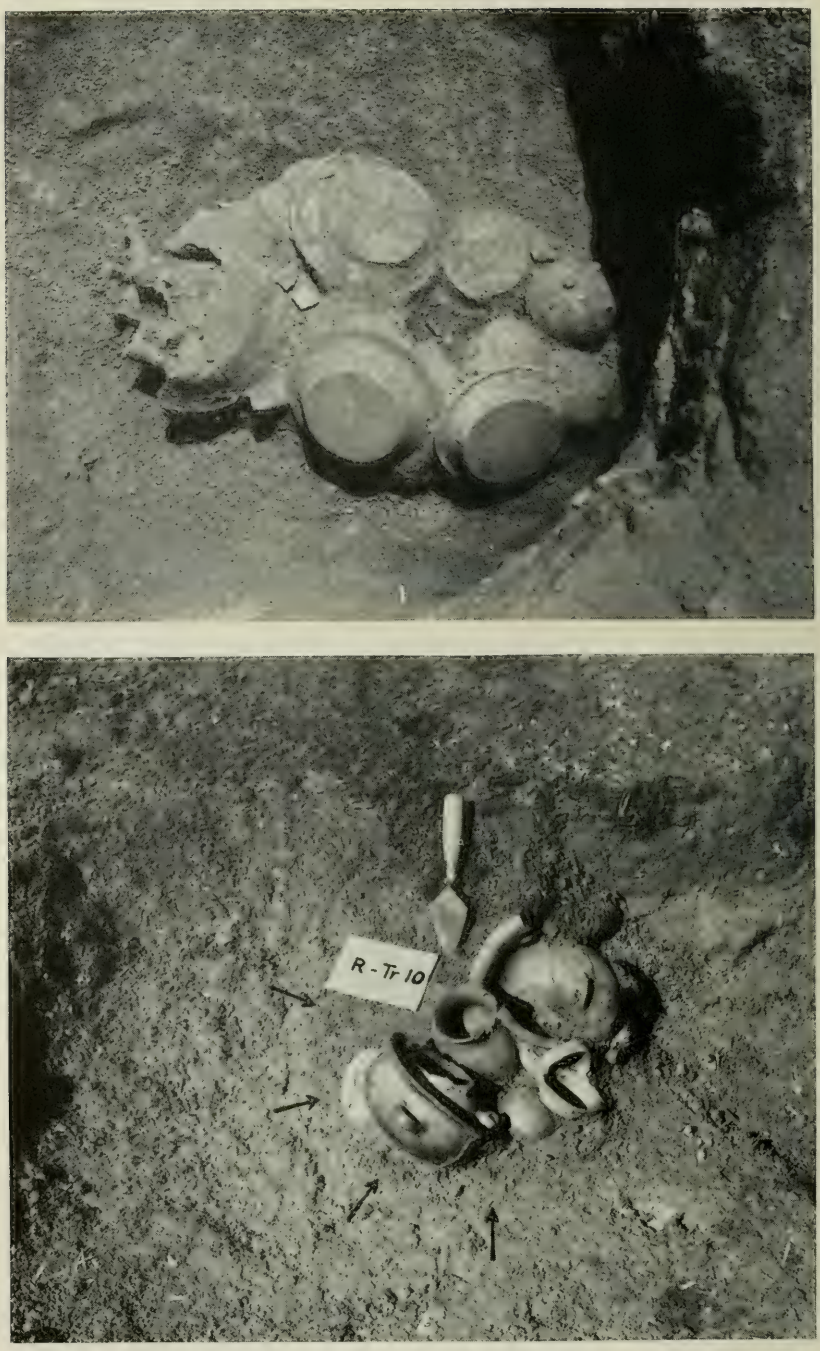
(For explanation, see page 127.)

TRENCH 26, SHOWING LAYER OF VOLCANIC ASH.

(For explanation, see page 127.)

1. Secondary Burial in Midden Layers, Trench 1.
2. Thick-rimmed Brown Ware Urn Containing Burial, Trench 19.

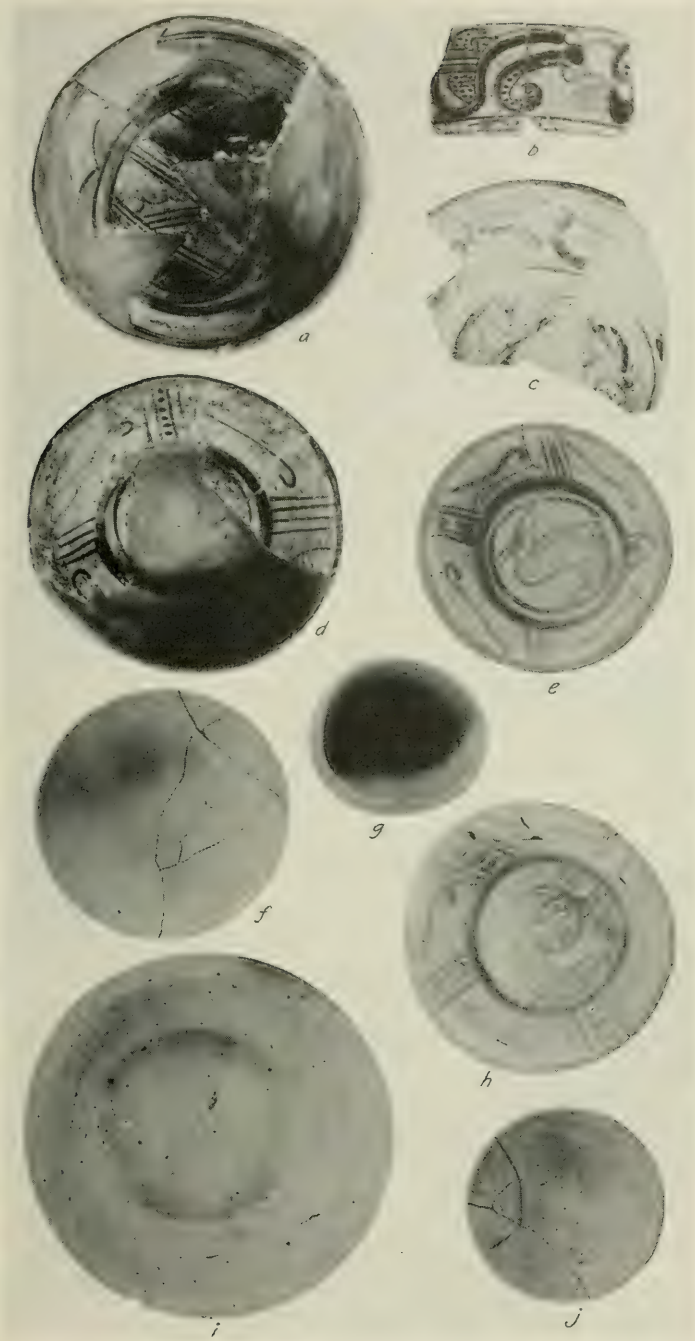
(For explanation, see page 127.)



CACHE LOTS OF POTTERY.

1, Trench 23 cache of figurines and vessels. 2, Intrusive Soncautla complex grave lot, trench 10.

(For explanation, see page 127.)



POLYCHROME BOWLS FROM TRENCHES 22–24

(For explanation, see page 127.)

POLYCHROME WARE FROM TRENCH 24.

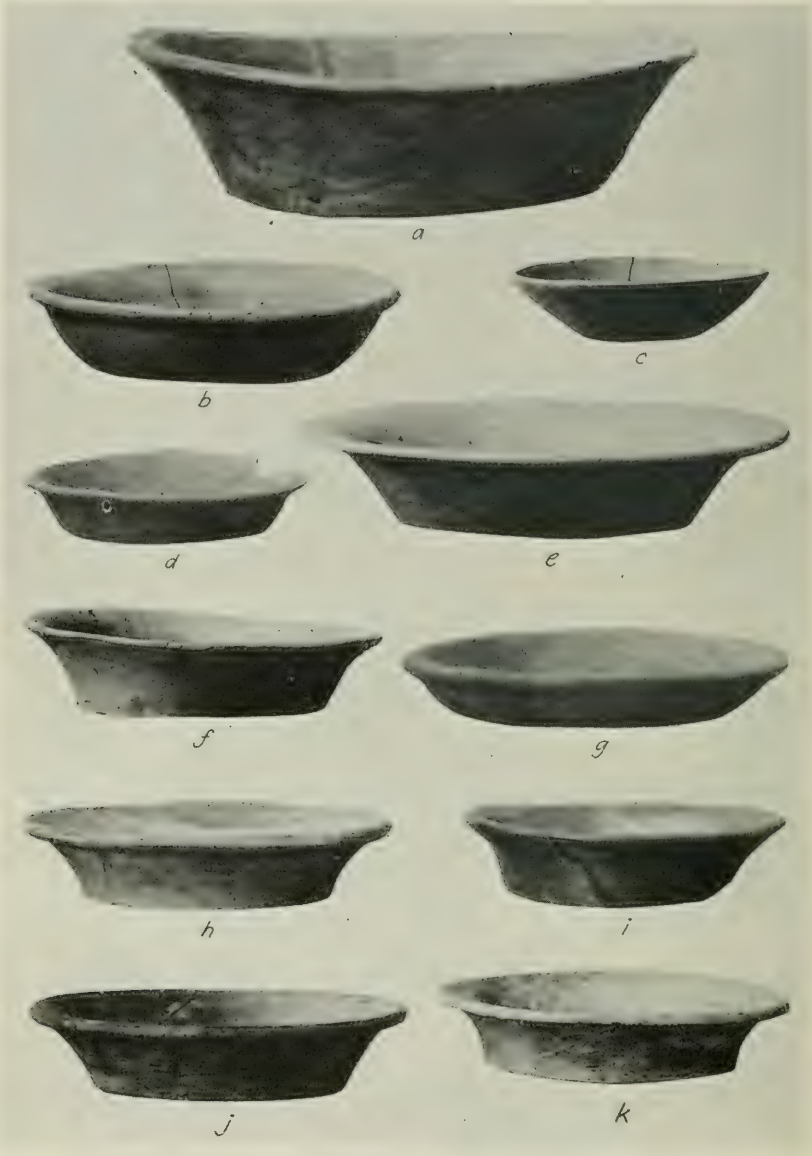
(For explanation, see page 127.)

a

b

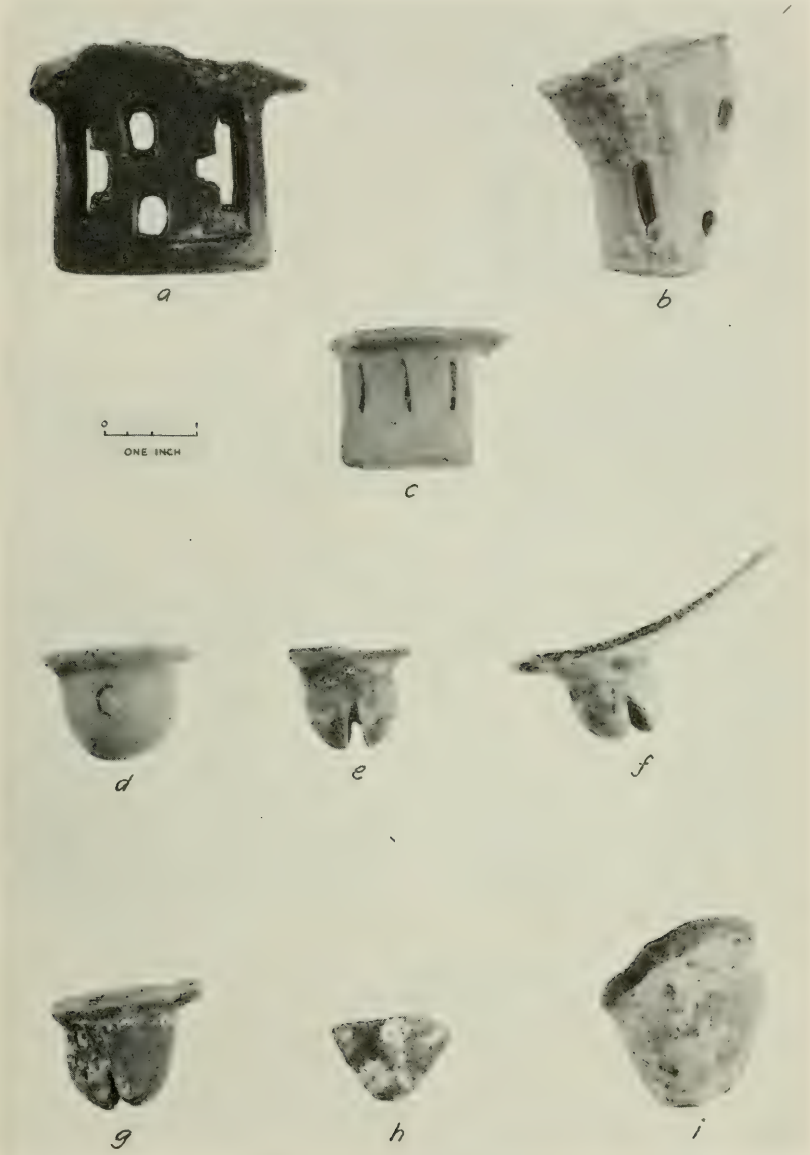
RESTORED POLYCHROME OLLA (OR SPOUTED VESSEL) WITH HOODED MOUTH

(For explanation, see page 128.)



POLYCHROME BOWLS AND DISHES. CACHE FROM TRENCH 23.

(For explanation, see page 128.)



VESSEL SUPPORTS, POLYCHROME AND BROWN WARE.

(For explanation, see page 128.)

POLYCHROME BOWLS AND DISHES FROM TRENCHES 23 AND 24, AND HYBRID FORMS FROM TRENCH 4.

(For explanation, see page 128.)

POLYCHROME VESSELS AND MINIATURE BOSSED INCENSARIO.

(For explanation, see page 128.)

BROWN WARE AND UNSLIPPED OLLA FORMS.

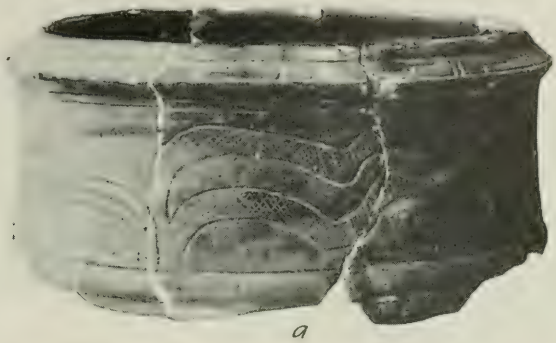
(For explanation, see page 128.)

STAMPED AND PUNCTATE FACES ON OLLA NECKS, AND JARS.

(For explanation, see page 128.)

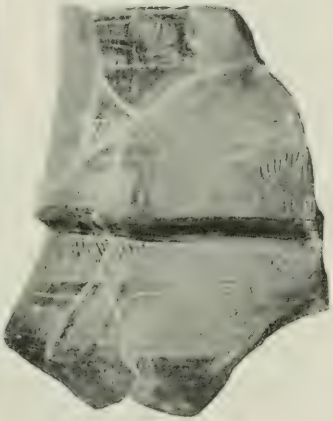
VARIOUS BROWN WARE AND BLACK WARE VESSELS.

(For explanation, see page 128.)



a

b

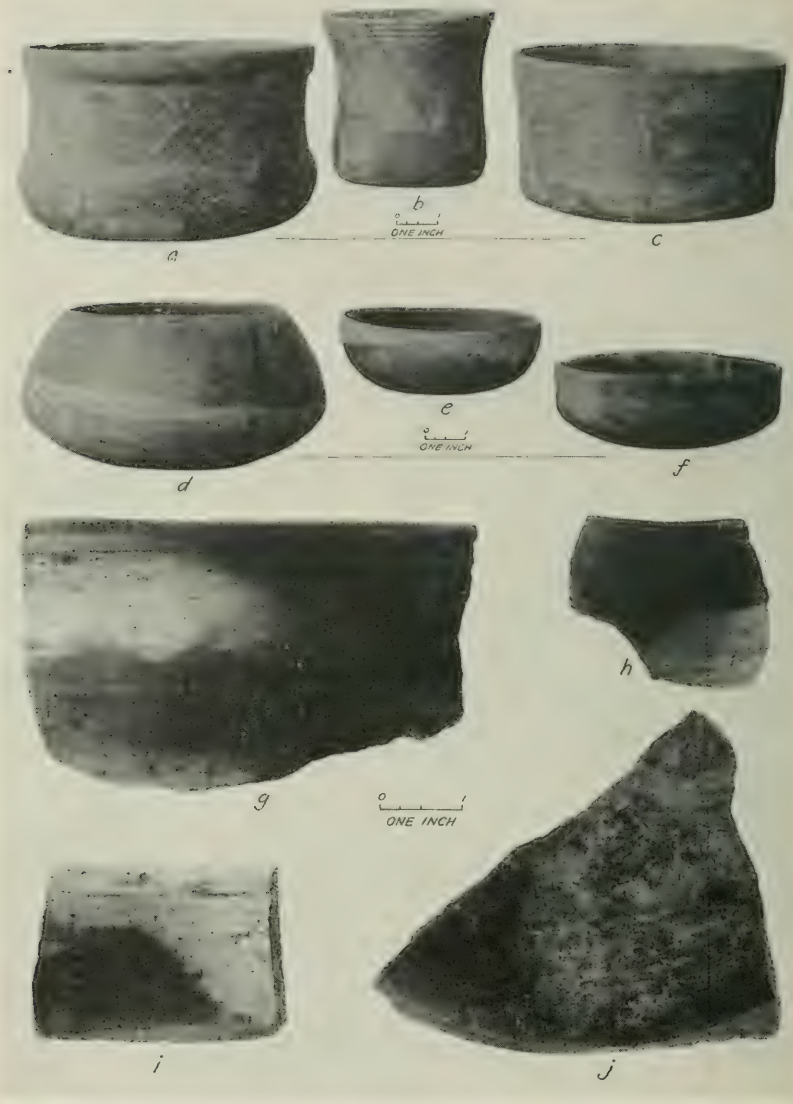


c

d

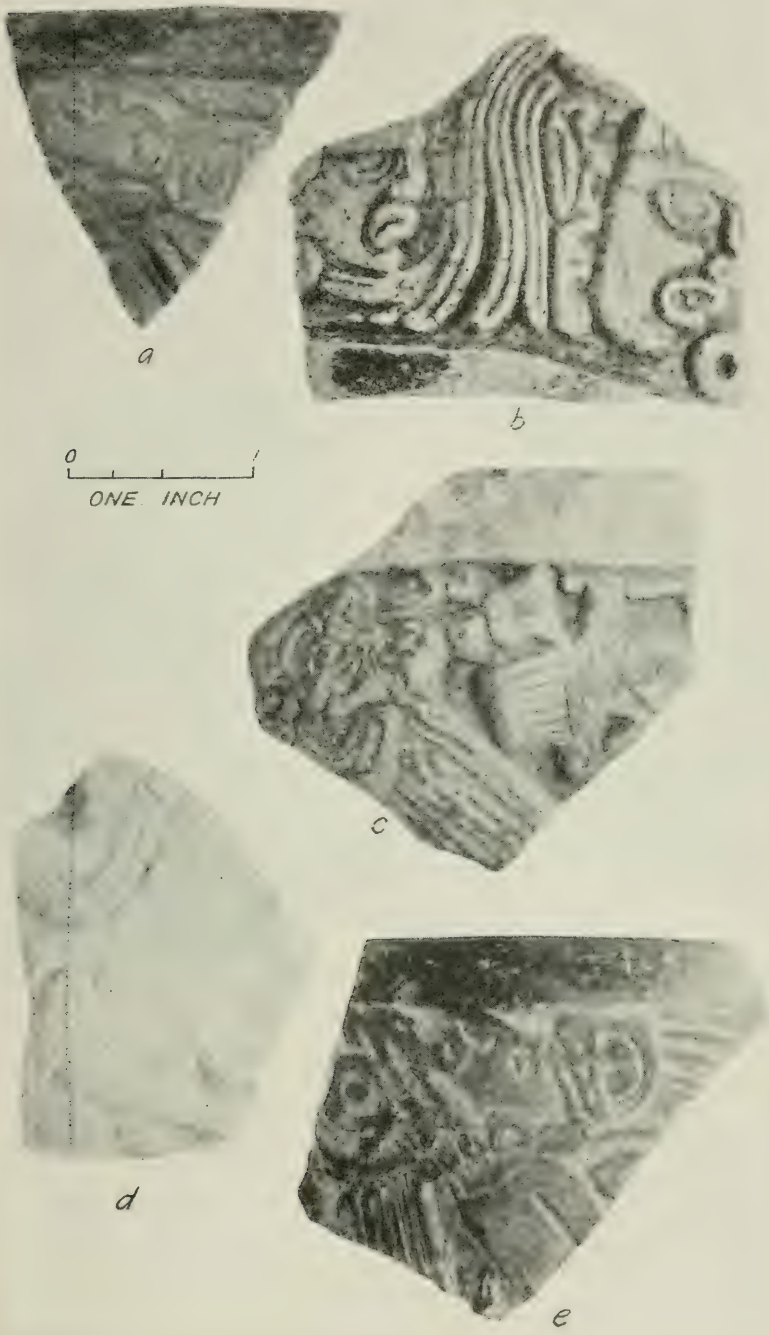
BLACK WARE JARS FROM 1939 COLLECTION

(For explanation, see page 129.)



BLACK WARE VESSELS AND SHERDS WITH IRREGULAR AREAS OF WHITE FROM FIRING.

(For explanation, see page 129.)



CARVED WARE SHERDS FROM TRENCHES 1, 2, 24, AND PURCHASE COLLECTION.

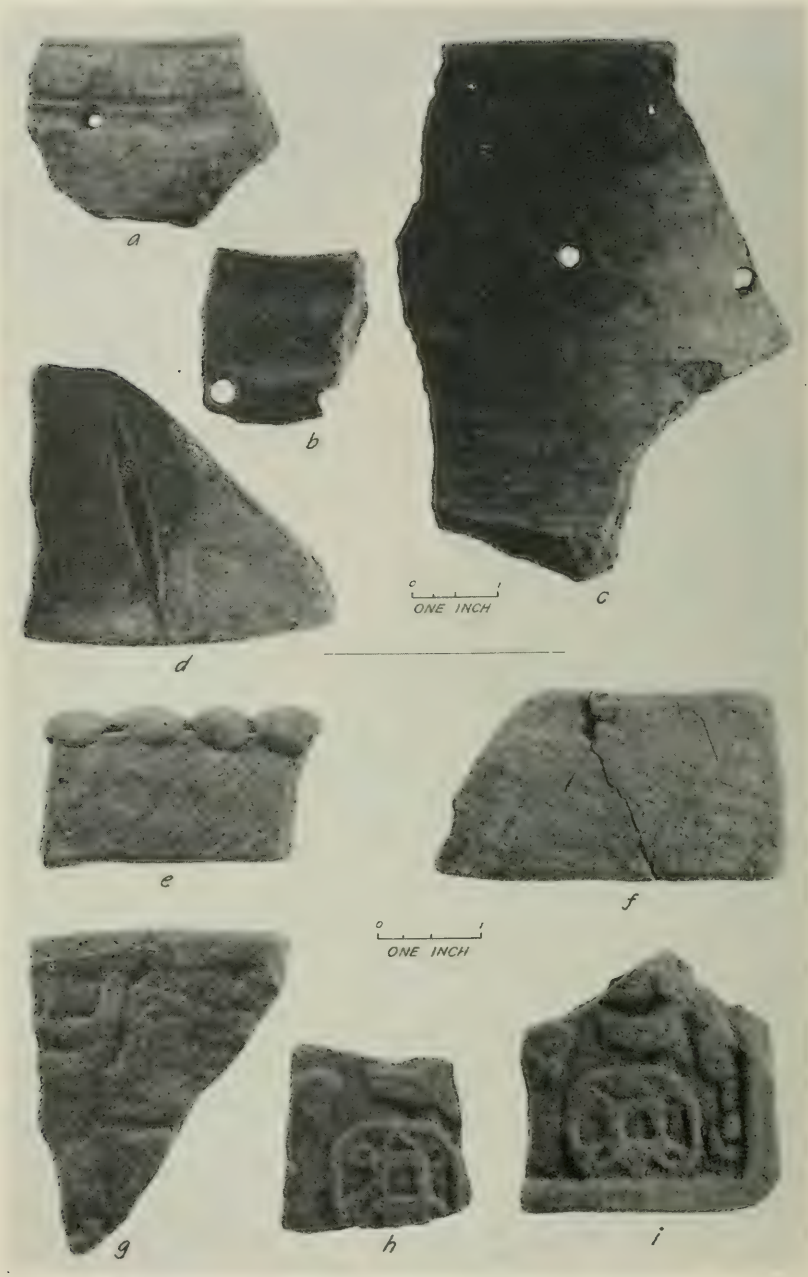
(For explanation, see page 129.)

SONCAUTLA COMPLEX TYPES.

(For explanation, see page 129.)

1939 RESTORED VESSELS, SONCAUTLA COMPLEX.

(For explanation, see page 129.)

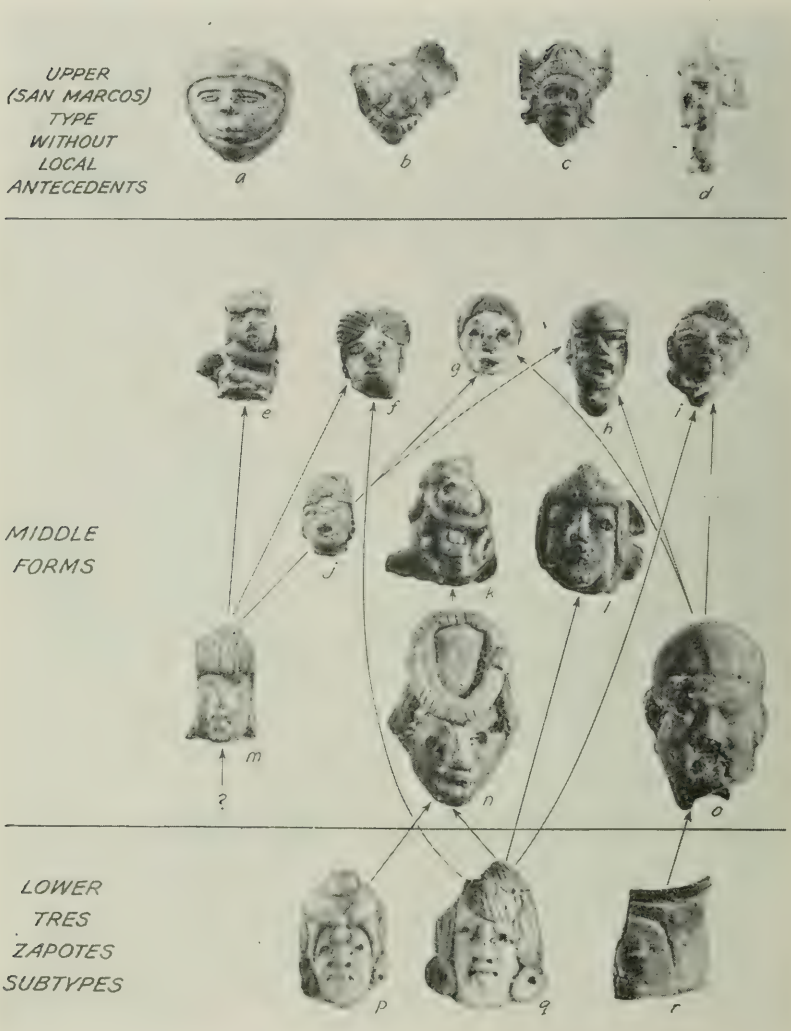


MISCELLANEOUS SHERDS.

(For explanation, see page 129.)

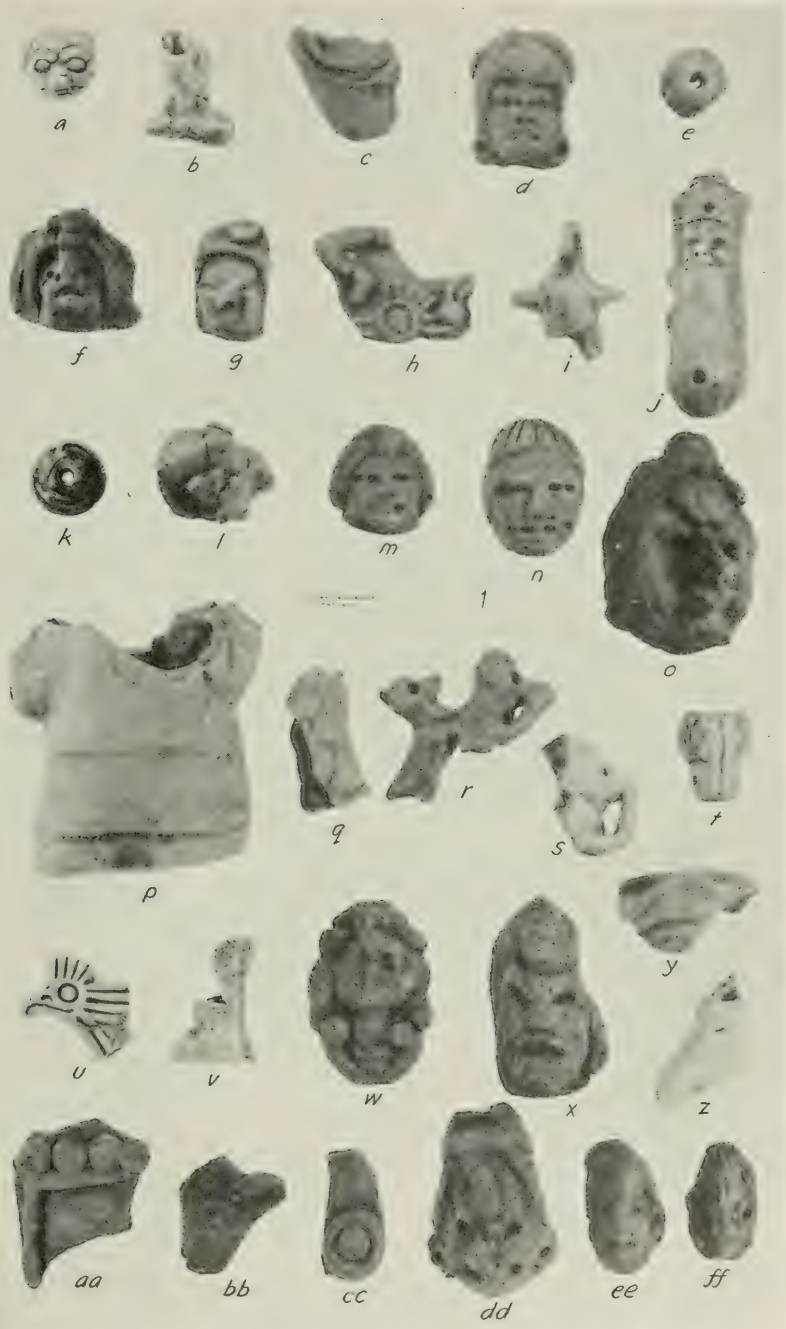
TYPOLOGY OF TRES ZAPOTES HAND-MADE FIGURINES, SHOWING PROFILES. 1939 COLLECTIONS.

(For explanation, see page 129.)



SCHEMATIC REPRESENTATION OF DEVELOPMENT AND HYBRIDIZATION OF TRES ZAPOTES HAND-MADE FIGURINES.

(For explanation, see page 129.)

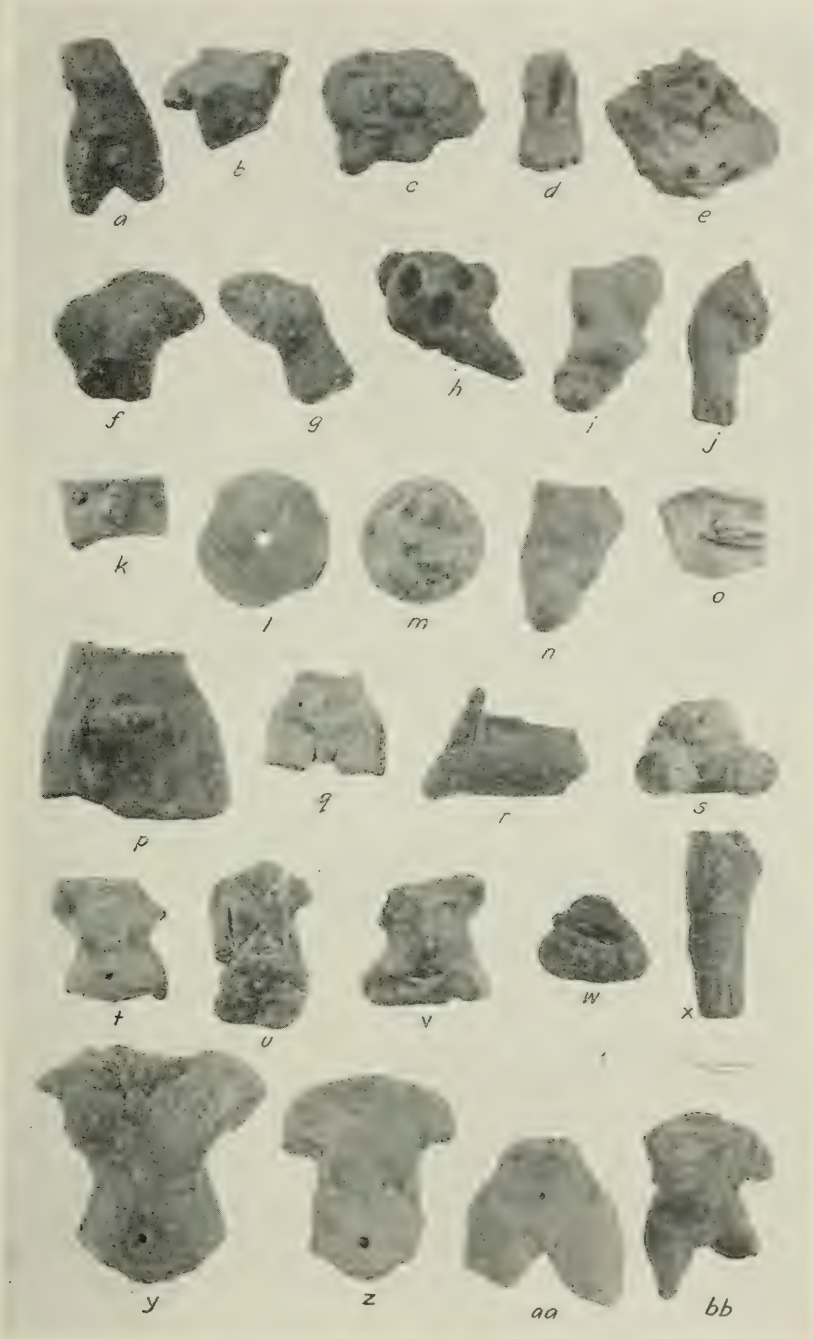


STRATIGRAPHY OF TRENCH 1 FIGURINES (0 TO 42 INCHES).

(For explanation, see page 129.)

STRATIGRAPHY OF TRENCH 1 FIGURINES (42 TO 72+ INCHES).

(For explanation, see page 130.)



STRATIGRAPHY OF TRENCH 1 FIGURINE BODIES AND MISCELLANEOUS OBJECTS.

(For explanation, see page 130.)

STRATIGRAPHY OF TRENCH 13 FIGURINES.

(For explanation, see page 130.)

STRATIGRAPHY OF TRENCH 13 FIGURINE BODIES AND MISCELLANEOUS OBJECTS.

(For explanation, see page 130.)

STRATIGRAPHY OF TRENCH 19 FIGURINES AND MISCELLANEOUS OBJECTS.

(For explanation, see page 131.)

STRATIGRAPHY OF TRENCH 19 FIGURINE BODIES AND MISCELLANEOUS OBJECTS.

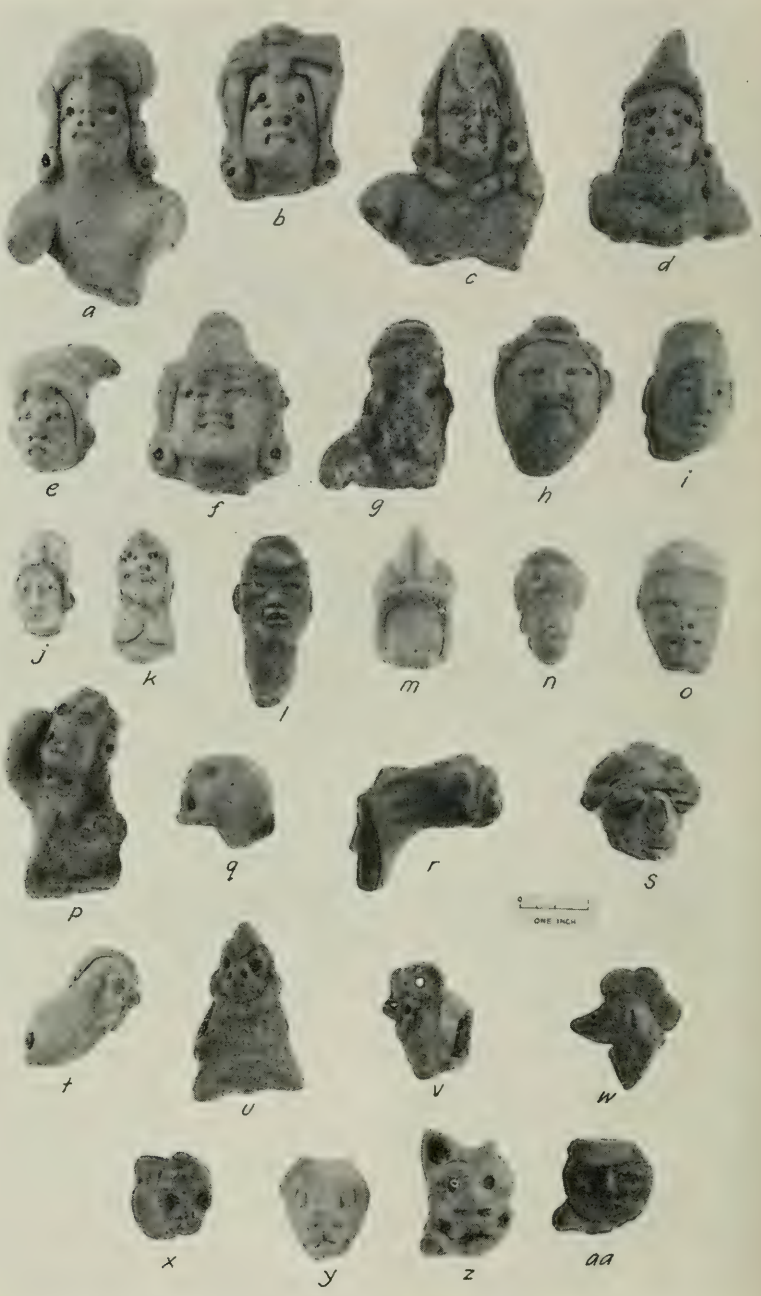
(For explanation, see page 131.)

STRATIGRAPHY OF TRENCH 26 FIGURINES.

(For explanation, see page 131.)

STRATIGRAPHY OF TRENCH 26 FIGURINE BODIES AND MISCELLANEOUS OBJECTS

(For explanation, see page 131.)



MISCELLANEOUS FIGURINE TYPES (PURCHASE COLLECTION).

(For explanation, see page 131.)

MISCELLANEOUS FIGURINE TYPES (PURCHASE COLLECTION).

(For explanation, see page 132.)

MISCELLANEOUS FIGURINE TYPES (PURCHASE COLLECTION).

(For explanation, see page 132.)

MISCELLANEOUS FIGURINE TYPES ETC. (PURCHASE COLLECTION).

(For explanation, see page 132.)

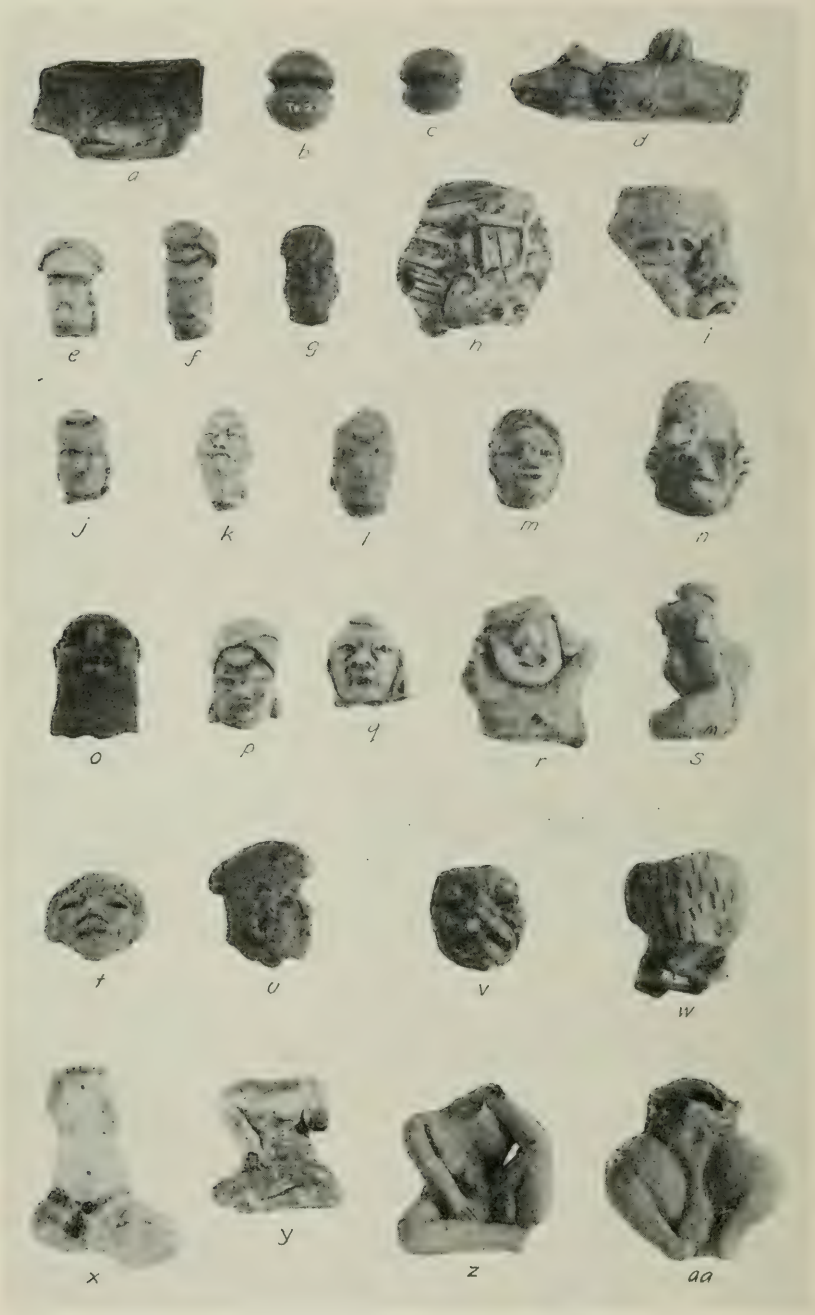
MISCELLANEOUS FIGURINES AND SEALS.

(For explanation, see page 132.)

MISCELLANEOUS FIGURINES FROM TRENCH 10.
(For explanation, see page 132.)

TRENCH 16 FIGURINES.
(For explanation, see page 132.)

MISCELLANEOUS TRES ZAPOTES HAND-MADE FIGURINES. TRENCH 22.
(For explanation, see page 132.)



MISCELLANEOUS FIGURINE TYPES, MOSTLY TRES ZAPOTES. TRENCH 22.

(For explanation, see page 133.)

MISCELLANEOUS FIGURINE TYPES. TRENCH 23.

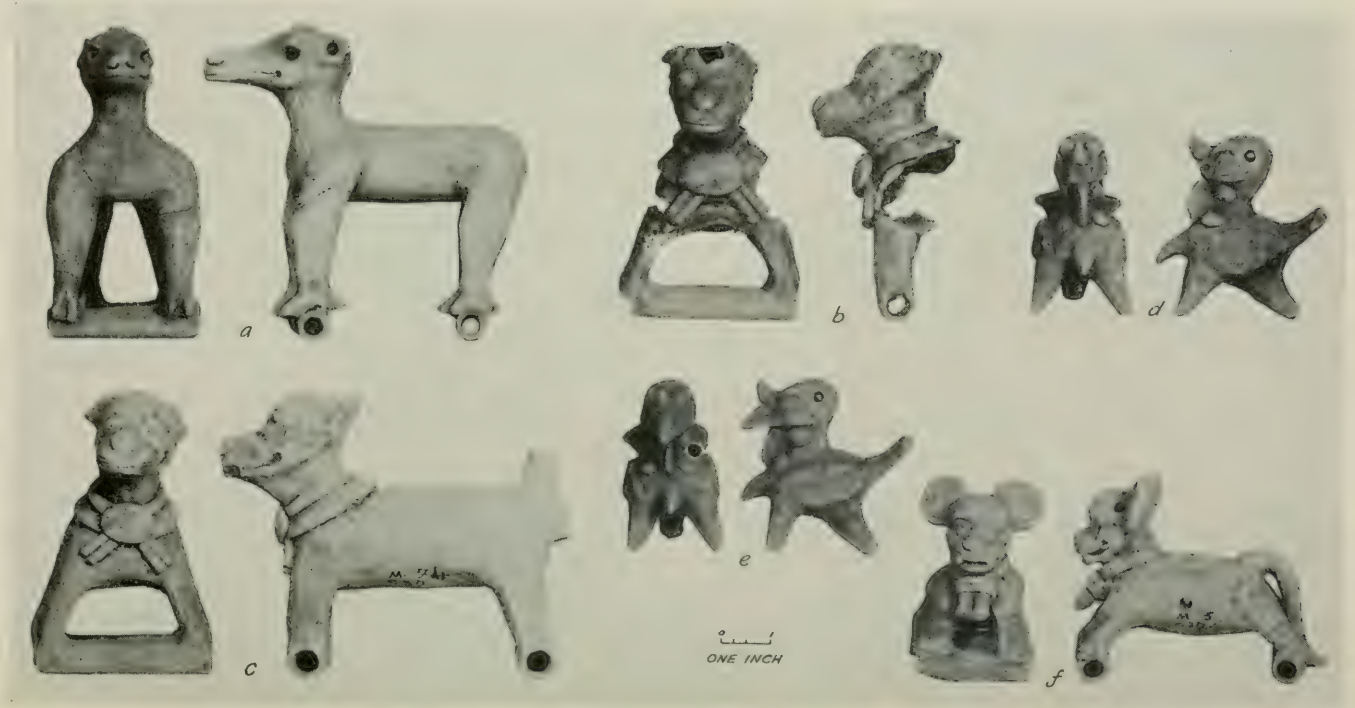
(For explanation, see page 133.)

TYPES OF FIGURINES AND MISCELLANEOUS OBJECTS. TRENCH 24.

(For explanation, see page 133.)

SAN MARCOS TYPE MOLD-MADE FIGURINES. CACHE FROM TRENCH 23.

(For explanation, see page 133.)



SAN MARCOS TYPE FIGURINES. PROFILE AND FRONT VIEWS. CACHE FROM TRENCH 23.

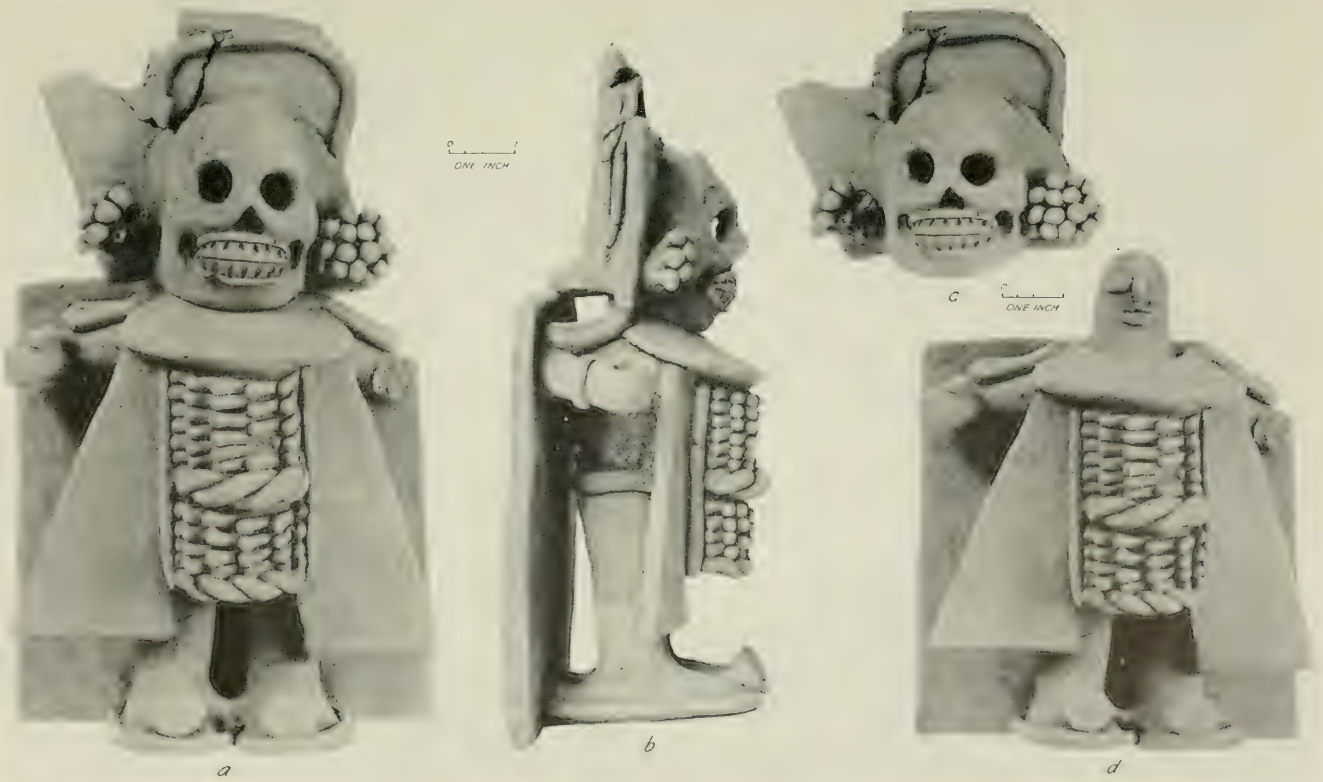
(For explanation, see page 133.)

SAN MARCOS AND FOREIGN TYPES OF MOLD-MADE FIGURINES, AND PERFORATED DISKS. CACHE FROM TRENCH 23.

(For explanation, see page 133.)

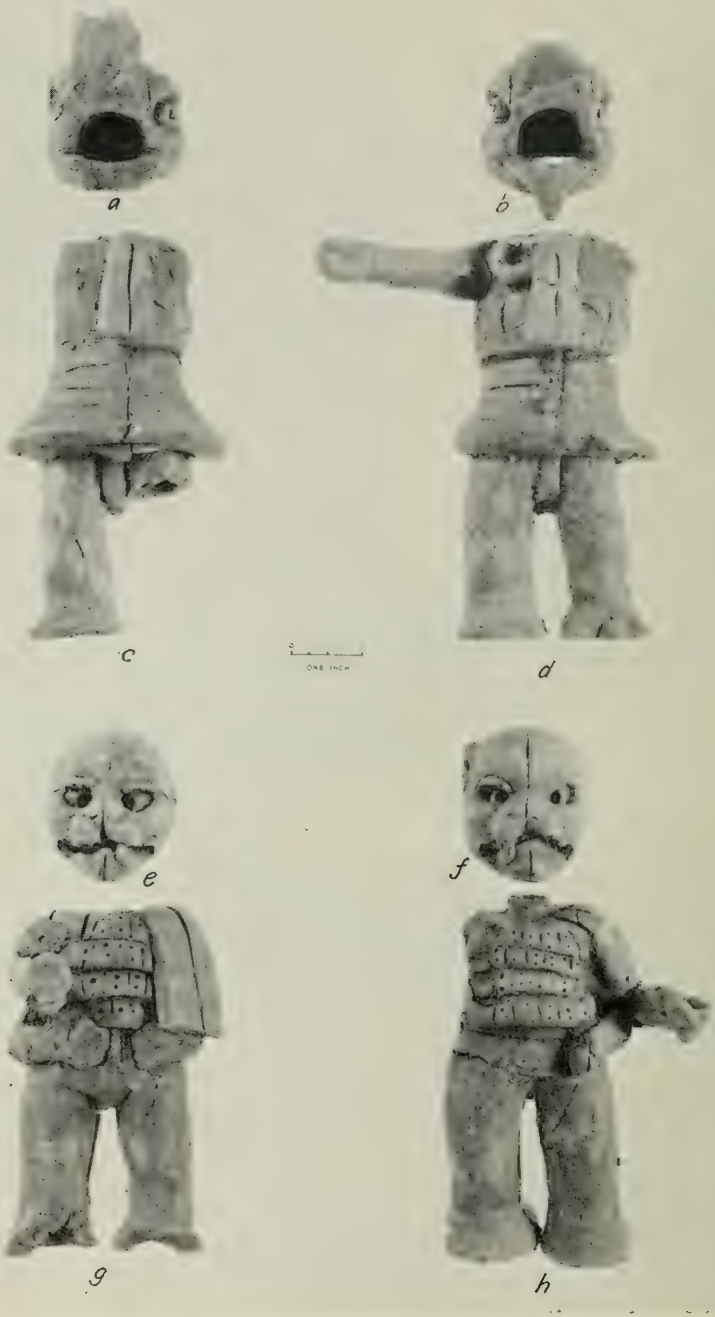
SAN MARCOS-LIRIOS HYBRID TYPE FIGURINES. CACHE FROM TRENCH 23.

(For explanation, see page 133.)



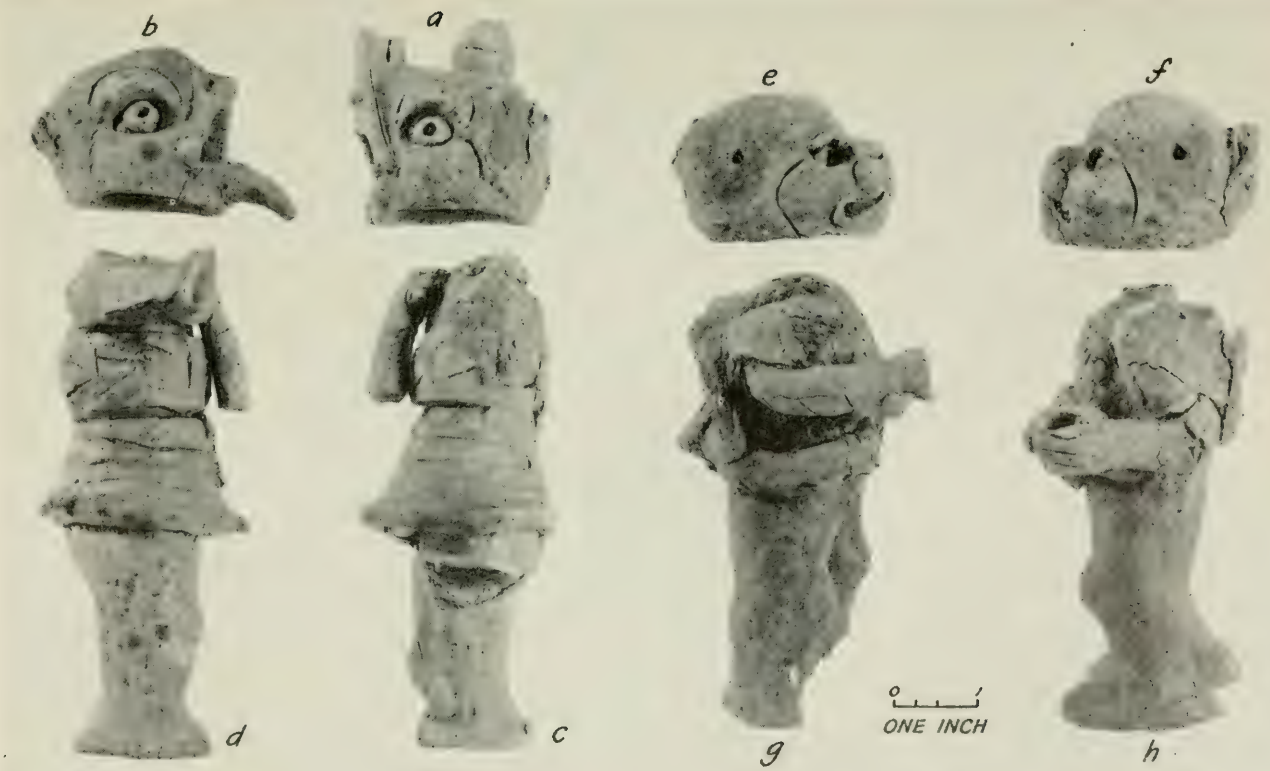
COMPOUND FIGURINE, LIRIOS TYPE. CACHE FROM TRENCH 23.

(For explanation, see page 133.)



ABERRANT TYPE FIGURINES, HEADS AND BODIES IN SUGGESTED ASSOCIATION CACHE FROM TRENCH 23.

(For explanation, see page 133.)



PROFILE OF ABERRANT TYPE FIGURINES SHOWN IN PLATE 53.

(For explanation, see page 133.)

LIRIOS TYPE MODELED INCENSARIO LID WITH VERTICAL FLANGES. FRONT AND PROFILE. TRENCH 20.

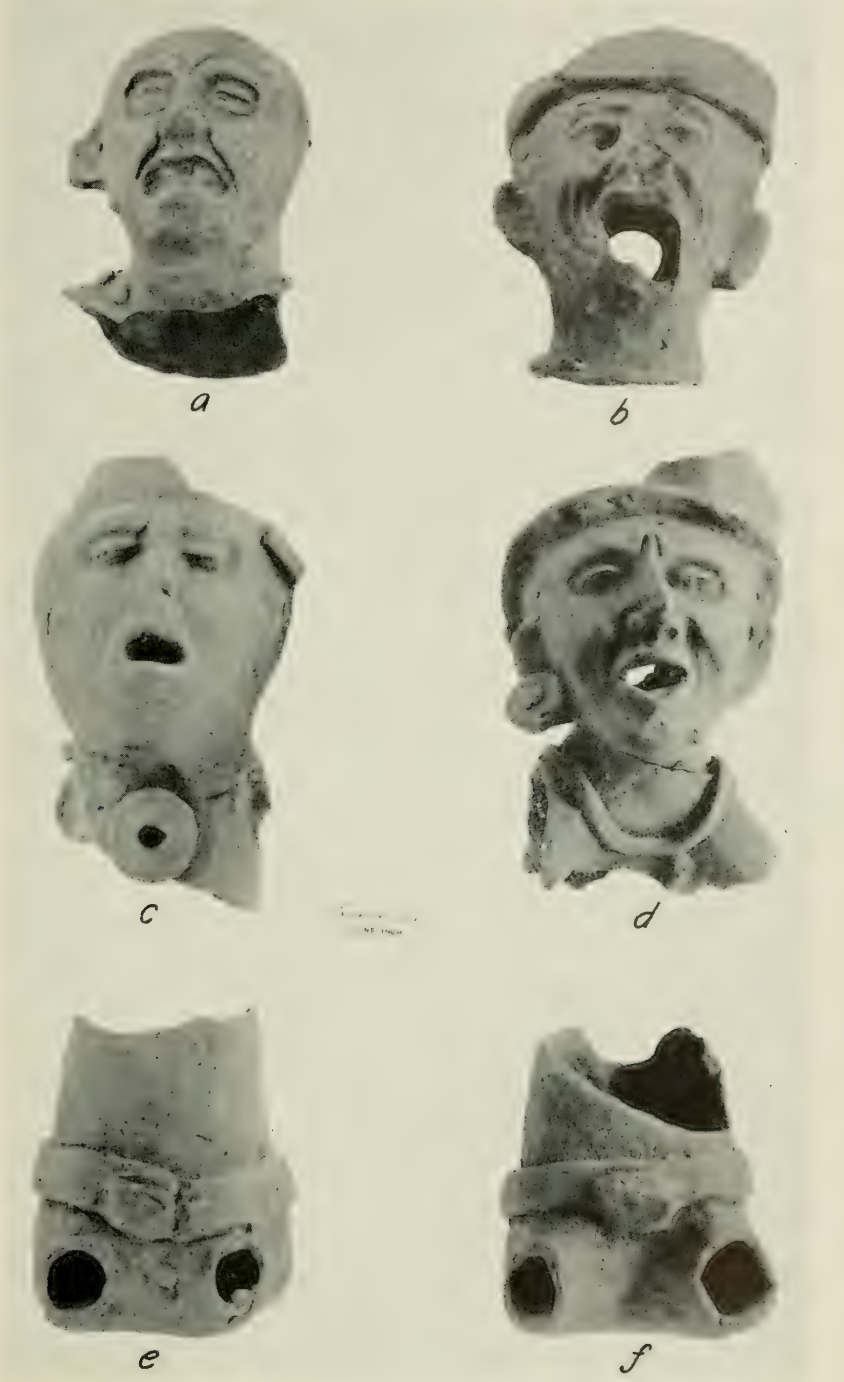
(For explanation, see page 133.)

LIRIOS TYPE MODELED FIGURINES. TRENCH 20.

(For explanation, see page 133.)

PROFILE OF LIRIOS TYPE MODELED FIGURINES SHOWN IN PLATE 56.

(For explanation, see page 134.)



LIRIOS TYPE MODELED FIGURINES. TRENCH 20.

(For explanation, see page 134.)

PROFILE OF LIRIOS TYPE MODELED FIGURINES SHOWN IN PLATE 58.

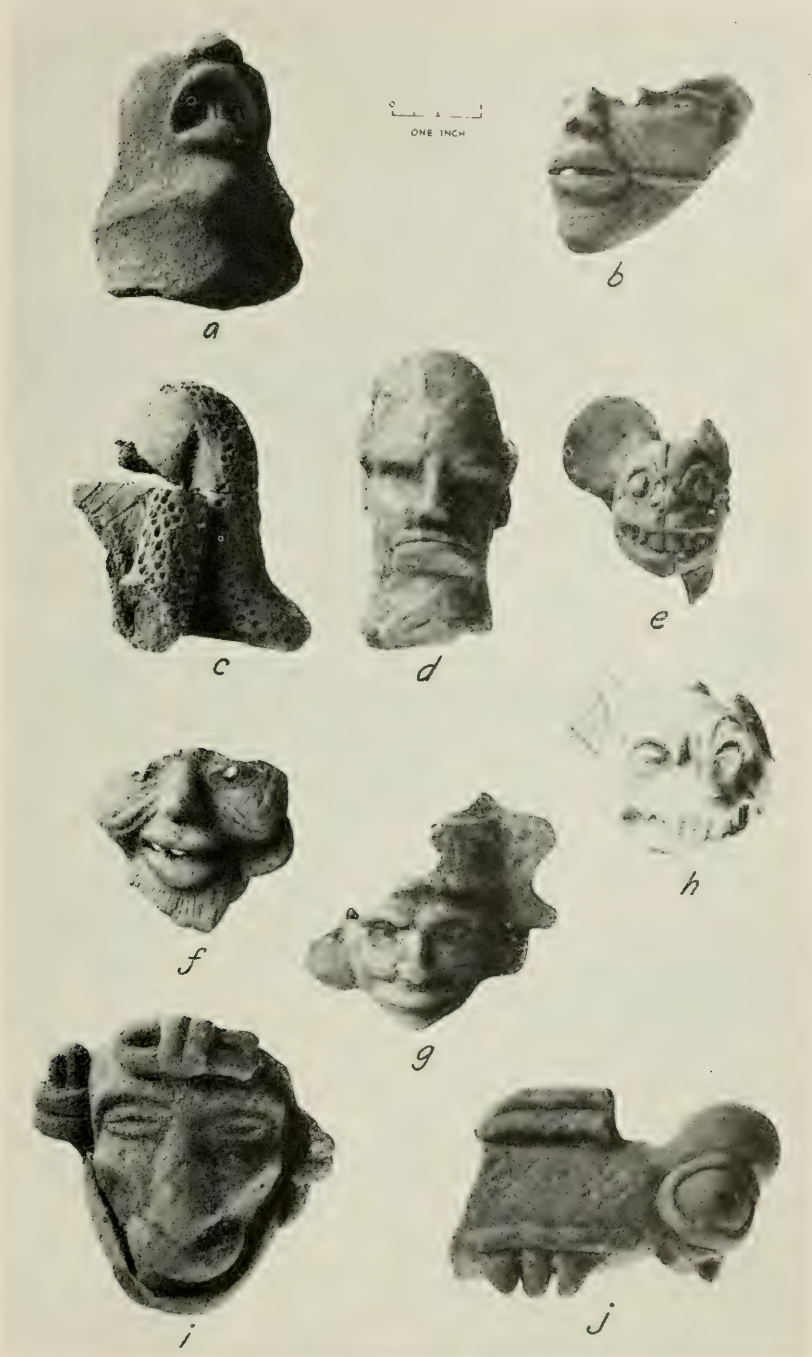
(For explanation, see page 134.)

LIRIOS TYPE MODELED FIGURINES. TRENCH 20.

(For explanation, see page 134.)

LIRIOS TYPE MODELED FIGURINES. TRENCH 20.

(For explanation, see page 134.)



MISCELLANEOUS FIGURINES FROM TRENCH 20.

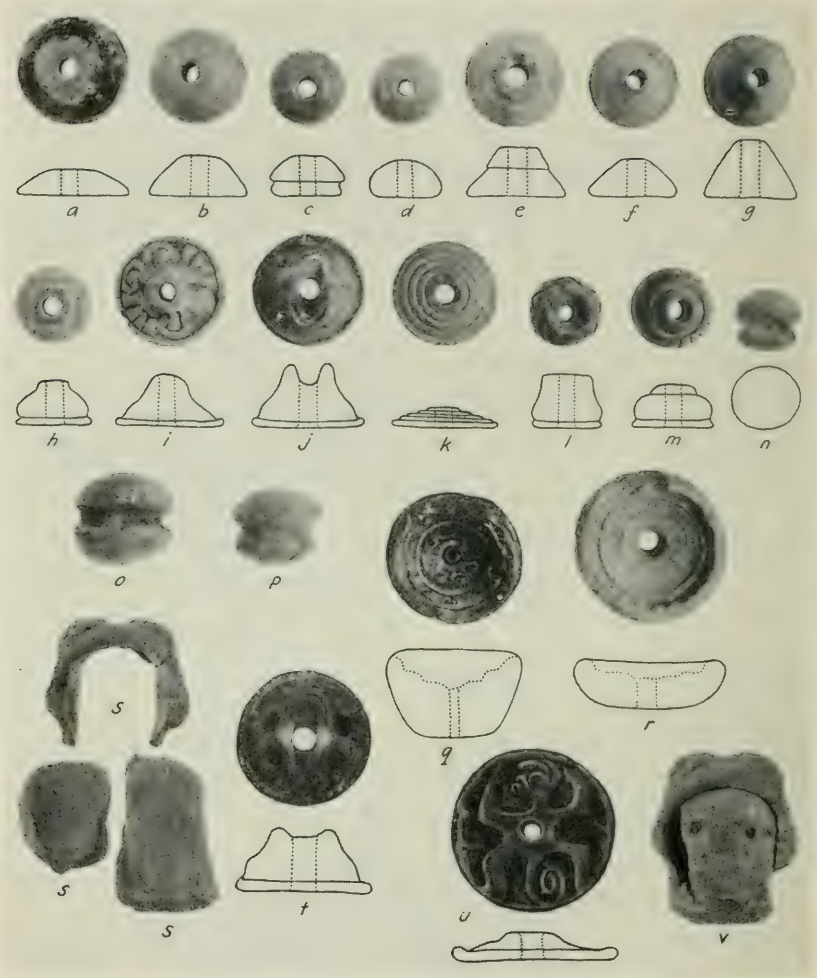
(For explanation, see page 134.)

ADORNOS, ARMS, HANDS, AND LEGS OF LIRIOS TYPE MODELED FIGURINES. TRENCH 20.

(For explanation, see page 134.)

DECORATED VERTICAL FLANGE OF LIRIOS TYPE INCENSARIO LID (1939 COLLECTION).

(For explanation, see page 134.)



MISCELLANEOUS OBJECTS OF CLAY.

(For explanation, see page 134.)

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